

The Canadian Hospital Association is the federation of hospital associations in Canada and the Canadian Medical Association in co-operation with the federal and provincial governments and voluntary non-profit organizations in the health field.



Canadian Hospital

THE JOURNAL OF THE CANADIAN HOSPITAL ASSOCIATION

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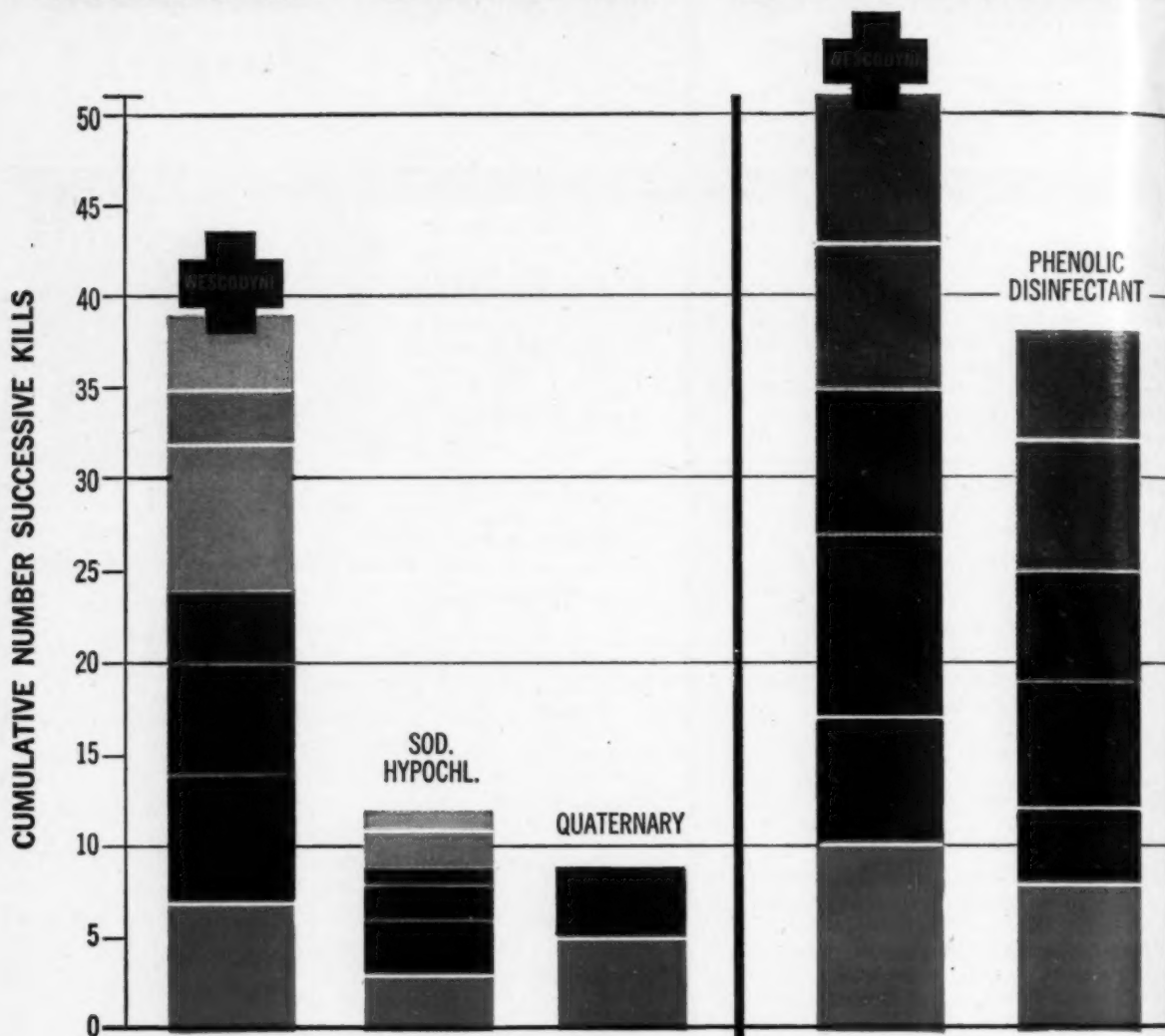
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TESTS SHOW GREATER



Capacity Test for Germicidal Action. (A. Cantor and H. Shelanski as described in Soap and Sanitary Chemicals, February 1951.) **Explanation:** This method essentially consists of adding to the use-dilution of the disinfectant or sanitizer, successive doses of a 50/50 mixture of milk plus broth culture of test organisms. These doses are added at ten-minute intervals. Thirty seconds after each addition, a transfer is made into broth containing a suitable inactivator. This method makes it possible to determine the capacity of a germicide to kill before the micro-organisms and organic contamination have exhausted its germicidal action. **Organisms:** *Salmonella typhosa*, ATCC #6539; *Micrococcus pyogenes*, var. *aureus*, ATCC #6538; *Salmonella pullorum*, ATCC #9093; *Pseudomonas aeruginosa*, ATCC #8689; *Trichophyton interdigitale* Emmons 640, ATCC #9533; *Penicillium luteum*, ATCC #9644; *Saccharomyces cerevisiae*, ATCC #10274. **Dilutions:** WESCODYNE: 1:320 (50 ppm available iodine); Sodium hypochlorite: (100 ppm available chlorine); Quaternary: (50%) 1:5,000 (200 ppm active ingredient). **Temperature:** 15°C. **Media:** Fluid thioglycolate medium, USP XIII was used for testing WESCODYNE and sodium hypochlorite "Lethen" broth was used for testing alkyl dimethyl benzyl ammonium chloride.* All tests were re-subcultured in the same medium. **Results:** See above chart. **Conclusion:** The cumulative number of successful kills shows WESCODYNE to be over three times more effective than the nearest material tested.

*Neopeptone dextrose broth was used for testing the alkyl dimethyl benzyl ammonium chloride against the three fungi.

Wescodyne vs. Leading Phenolic Disinfectant. (A. Cantor and H. Shelanski Capacity Test as described in Soap and Sanitary Chemicals, February 1951.) The method used in this test is the same as that used in the Capacity Test for Germicidal Action described at left. **Dilution:** WESCODYNE: 1:213 (75 ppm available iodine); phenolic disinfectant: 1:100 **Temperature:** 15°C. **Media:** Fluid thioglycolate medium, U.S.P. XIII was used for testing WESCODYNE and FDA nutrient broth was used for testing the phenolic disinfectant. All tests were re-subcultured in the same medium to eliminate bacteriostasis. **Results:** see above chart. **Conclusion:** This test shows that the bactericidal effectiveness (in the presence of organic contamination) of WESCODYNE at a dilution of 1:213 (75 ppm available iodine) is greater than that of a leading phenolic disinfectant at a dilution of 1:100.

PATHOGEN COLOR KEY:

- Salmonella typhosa* (typhoid organism)
- M. pyogenes v. aureus* (staphylococcus organism)
- Salmonella pullorum* (poultry disease organism)

- Pseudomonas aeruginosa* (wound contaminant organism)
- Trichophyton interdigitale* (athlete's foot type of fungus organism)
- Penicillium luteum* (mold organism)
- Saccharomyces cerevisiae* (yeast organism)

- Strep. pyogenes hemolyticus* (streptococcus organism)
- Escherichia coli* (enteric organism)
- Shigella sonnei* (dysentery organism)
- Salmonella schottmuelleri* (food contaminant causing dysentery)

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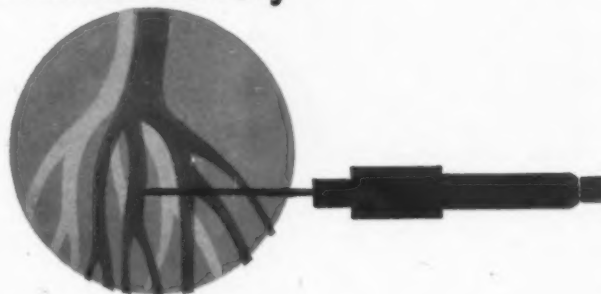
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references: (1) Ross, S.; Puig, J. R., & Zaremba, E. A., in Welch, H., & Marti-Ibañez, F.: *Antibiotics Annual 1957-1958*, New York, Medical Encyclopedia, Inc., 1958, p. 803. (2) Glazko, A. J., et al.: *ibid.*, p. 792. (3) McCrumb, F. R., Jr.; Snyder, M. J., & Hicken, W. J.: *ibid.*, p. 837. (4) Payne, H. M., & Hackney, R. L., Jr.: *ibid.*, p. 821.

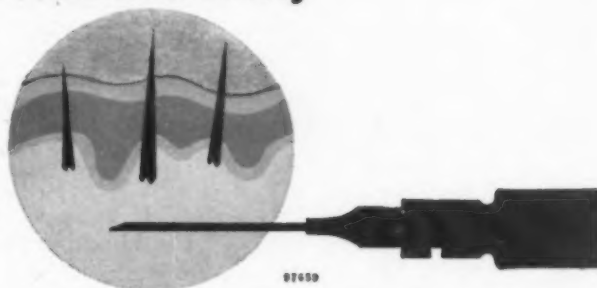
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Notes About People

A Salute to a Secretary-Treasurer

In honouring the importance of the volunteer in hospital work, the Maritime Hospital Association paid tribute to Gladys M. Porter, secretary-treasurer of that association. The following is from the page which was dedicated to Mrs. Porter in the report of the proceedings of the M.H.A. sixteenth annual meeting.



Gladys M. Porter

"We record here our grateful appreciation for the outstanding contribution rendered to the Maritime Hospital Association by our secretary-treasurer. It was at the first annual meeting of the M.H.A. held in Kentville, N.S., in 1943 that she was appointed treasurer, and was later named secretary-treasurer. Thus for 17 years Mrs. Porter has in reality been the administrator of this organization. Her effort on our behalf has been entirely on a voluntary basis.

"What makes her such a dynamic personality? The story of her life gives the key to the answer. Born at Sydney, N.S., on August 4, 1894, she is the daughter of the late Wallace A. Richardson and the late Christina MacPherson Richardson. During her father's tenure of office as mayor, the first City of Sydney Hospital was built. Her mother was the first president of

the hospital auxiliary and served as such for 17 years. The Richardson home was in effect the linen room of the hospital.

"After graduating from Sydney Academy and Empire Business College, she came to Kentville to work in the engineering office of the Dominion Atlantic Railway. On December 1914 she married H. Wyman Porter, well known newspaper correspondent and one of Kentville's outstanding athletes.

"Her whole life has been one of devotion to her community. Few people surpass her record of service. For ten years she has been mayor of Kentville, and before that she was a town councillor for three years. She organized and was president of the Khaki Club in Sydney during World War I. She organized and was O.C. of the Women's Volunteer Corps in Kentville during the second world war.

"For this and other war service she was given the M.B.E. by King George VI. A member of the St. John Ambulance Association, she has taken every course. She was presented with the Medal of Serving Sister in Ottawa by Governor-General Vincent Massey, and she was recently made an honorary member of the Nova Scotia Red Cross Society who also presented her with a service medal.

"Among her present interests are the following: president, Kentville-Wolfville Cancer Unit, Canadian Cancer Society; board member, Canadian Institute for the Blind, Kings County Unit; president, Ladies' Auxiliary, Kentville Baptist Church and also a member of the church choir; chairman, March of Dimes, Kings Co., for the past six years; chairman, local Red Cross Hospital Visiting Committee; member of the Visiting Committee, Kings County Hospital; deputy county court clerk and deputy prothonotary, Supreme Court; chairman, Kentville Electric Commission; chairman Kentville Memorial Park Commission.

"Notwithstanding her many and varied interests in community service, Mrs. Porter still maintains a deep interest in hospital work. She has been president of the Ladies' Senior Hospital Auxiliary of the Blanchard-Fraser Memorial

Hospital for the past 20 years and is also a member of the board of directors of the Kentville Hospital Association."

Dr. R. W. I. Urquhart Honoured

On May 30 Dr. R. W. Ian Urquhart, chairman of the Ontario Hospital Services Commission, received a Degree of Doctor of Laws, honoris causa, from Queen's University, Kingston, Ont. The degree was conferred upon Dr. Urquhart during the Convocation of the university's Faculty of Medicine, for which Dr. Urquhart gave the convocation address.

Given F.R.C.P.

Dr. G. D. W. Cameron, Canada's Deputy Minister of Health, has been made a Fellow of the Royal College of Physicians, in London, England. Dr. Cameron, deputy minister since 1946, has recently headed the Canadian delegation to the 12th World Health Assembly in Geneva, Switzerland.

Born and educated in Ontario, Dr. Cameron served in the army during the first world war, and began his medical career when he graduated from Queen's University in 1927. He studied further at the School of Hygiene, University of Toronto, specializing in preventive medicine and public health, and took a Ph.D. in 1928. Post-graduate studies on a fellowship, teaching, and staff work with the Connaught Laboratories in Toronto, led to



Dr. G. D. W. Cameron

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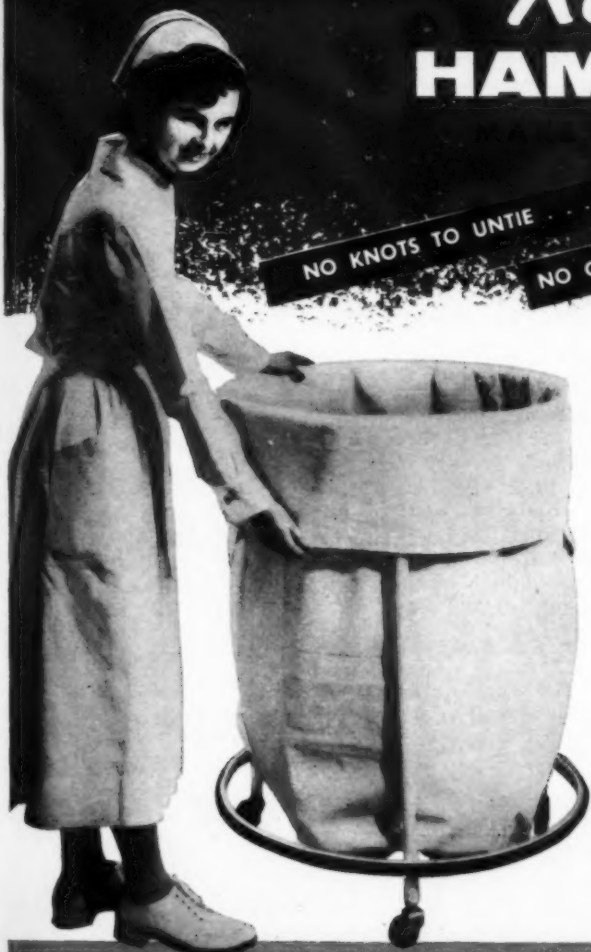
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People

(Continued from page 12)

his joining the federal service in 1939 as chief of the laboratory of hygiene in Ottawa. He became director of health services in the Department of National Health and Welfare in 1944 and two years later was appointed Deputy Minister of Health.

Raymond Edward Bennett, M.D.

Dr. Raymond Edward Bennett, medical superintendent at St. John's Sanatorium, St. John's, Newfoundland, died recently at the age of 60.

Born in St. John's, Dr. Bennett was educated at Bishop Field College, St. Andrew's College, Aurora, Ont., and Dalhousie University, Halifax, N.S. In 1927 he became resident physician at the St. John's General Hospital, and the following year he was appointed government physician, Labrador coastal service. In 1929 he took post-graduate training in London, England. He was then made visiting physician at the Grace Hospital in St. John's. It was in 1934 that he took the post

of medical superintendent at the sanatorium.

Dr. Bennett was also a founding member on the board of directors of the Newfoundland Tuberculosis Association which has been operating for the past 15 years.

At Peterborough

Richard Builder, Phm.B., D.H.A., is now assistant administrator of the Peterborough Civic Hospital, Peterborough, Ont. Mr. Builder, who served his residency year for the course in hospital administration, School of Hygiene, University of Toronto, at the Humber Memorial Hospital, Weston, Ont., has until now been assistant professor with the Department of Hospital Administration at the university.

C.M.A. Names New Officers

New officers for 1959-1960 in the Canadian Medical Association were announced recently. They are: *president*—H.R.H. Duke of Edinburgh; *past president*—Dr. A. F. Van Wart, Fredericton, N.B.; *president elect*—Dr. R. M. Parsons, Red Deer, Alta.; *deputy to the president*—Dr. E. K. Lyon, Leamington, Ont.; *chairman of General Council and*

of the executive committee—Dr. M. S. Douglas, Windsor, Ont. and *honorary treasurer*—Dr. G. W. Halpenny, Montreal, Que.

The Canadian Medical Association also awarded senior memberships on May 31 this year to five Ontario doctors for their contributions to medicine. Honoured by the association were Dr. Freeman A. Brockenshire, Windsor; Dr. George A. Campbell, Ottawa; Dr. William E. Gallie, Toronto; Dr. Clarence T. Routley, Toronto; and Dr. H. M. Yelland, Peterborough.

Sister Catherine Gerard Honoured

Sister Catherine Gerard, administrator of the Halifax Infirmary, Halifax, N.S., has been appointed a member of the Royal Society of Health, London, England. This honour pays tribute to Sister Catherine's contribution to nursing education and hospital administration.

A graduate of Hamilton Memorial Hospital (now St. Elizabeth Hospital in North Sydney, N.S.) Sister Catherine Gerard obtained a certificate in hospital administration from St. Louis University. She is a member of the board of direc-

(Concluded on page 26)

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JULY, 1959

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People

(Concluded from page 18)

tors of the Canadian Hospital Association, and was a member of the Catholic Hospital Association's executive board from 1951 to 1953. She has recently been named to the Nova Scotia Hospital Insurance Commission.

New Administrator at Cobourg

Floyd W. Abrams succeeds N. R. Dearlove as administrator of the Cobourg District Hospital, Cobourg, Ont. Mr. Abrams, a native of Port Hope, has operated his own florist business in that town since 1951, and for the past eight years has been an active member of the board of the Port Hope General Hospital, where he gained extensive experience as chairman of the hospital's property and management committee, the finance committee, and as vice-chairman of the board.

H. D. Jack Retires

H. D. Jack, for many years administrator and secretary of the Royal Edward Laurentian Hospital, Montreal, Que., has retired. Mr. Jack's first connection with the hospital was when he entered the

sanatorium at Ste. Agathe in 1918 as a patient. After regaining his health, he became associated with the Laurentian Sanatorium Association Inc., first as its business manager, and then its secretary. In 1940 he became secretary of the board of governors of the Royal Edward Institute and in 1942 when the Institute and hospital merged, Mr. Jack was given the position of administrator and secretary of the Royal Edward Laurentian Hospital.

B.C. Man Goes East

George S. Dickson, former administrator of Queen Victoria Hospital, Revelstoke, B.C., is now at Lindsay, Ont., as administrator of Ross Memorial Hospital there. J. A. Abrahamson has succeeded Mr. Dickson in the Revelstoke post as administrator.

Business Manager at Cornwall

H. Graham Gilhooly, a native of Nelson, B.C., has recently been appointed business manager at the Cornwall General Hospital, Cornwall, Ont. Mr. Gilhooly, who has taken the C.H.A.'s course in hospital organization and management, went to Cornwall from Cochrane, Ont., where he had been administrator at the Lady Minto

Hospital since August 1958. He was also accountant and business manager at the former Tranquille Sanatorium, in British Columbia, for four years.

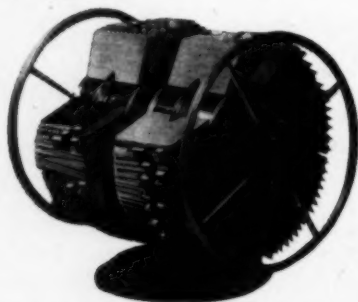
Changes at Goderich

Now administrator at Alexandra Marine and General Hospital, Goderich, Ont., is B. Leo Walzak. Mr. Walzak, who formerly managed a hosiery plant, has been on the Goderich Town Council and a member of the Separate School Board for some years. Mr. Walzak succeeds Frank Saunders, who retired from the Goderich post last year.

● Max Ginsberg of Gravenhurst, Ont., has been named laboratory technologist at the Bracebridge Memorial Hospital in Bracebridge. He will be in charge of pathology laboratory work and will be under the direction of Dr. Wright of the medical staff who is in charge of diagnostic services.

● Dr. Sylvio LeBlond, chief of the department of medicine of Hotel-Dieu St. Vallier, Chicoutimi, Que., succeeds Dr. F. Walter FitzGerald of Lachute, as president of the Quebec Division of the Canadian Medical Association.

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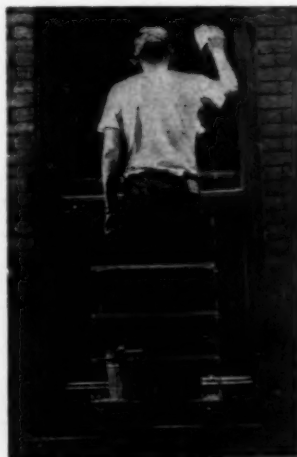
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Obiter Dicta

Accreditation is for the small hospital too

WE commend to all our readers the excerpts quoted in this issue on page 54. These are from an address given by Dr. W. I. Taylor, executive director of the Canadian Council on Hospital Accreditation, at the recent meeting of the Maritime Hospital Association. We agree most heartily with the philosophy Dr. Taylor developed in his paper, and from past and present experience he is well qualified to speak on this topic. Dr. Taylor believes that the hospital accreditation program is for *all* hospitals. At present, because of administrative and financial limitations, the program is available only to Canadian hospitals which have 25 or more beds. It is a sad commentary that, after some forty years of the hospital standardization program of the American College of Surgeons and more lately the accreditation program under the Joint Commission on the Accreditation of Hospitals, only seven per cent of Canadian hospitals of 25 to 50 beds have taken advantage of the benefits that can be derived from participation.

Dr. Taylor gave several reasons why any small hospital should be interested in accreditation—(a) most small hospitals are true community hospitals and thus, more than any others, represent voluntary association and voluntary effort; (b) patient care is just as important in small hospitals as in large; (c) there is no excuse for having different standards of care for different sizes of hospitals; and (d) in the small hospital patient care can be more personalized.

Although the *Standards for Accreditation of Canadian Hospitals* may appear at first glance to be a formidable document demanding a pattern of organ-

ization and requiring facilities and personnel beyond the resources of many small hospitals, this is not the case. Ability to meet accreditation requirements is neither restricted nor enhanced by the physical size of the hospital or the numerical strength of the medical staff.

The Canadian Council on Hospital Accreditation is anxious to extend the benefits of accreditation to more of the smaller hospitals in Canada. The Council is not happy about the present situation and hopes for improvement, since trustees, administrators, medical and nursing staffs would benefit significantly by participating. More important, patients would benefit also. It appears to your editor that it is the duty of hospital associations, trustees and administrators to do something about it, and thus assist the Council in encouraging a much higher percentage of small hospitals to be interested in accreditation.

It's never too late to learn

ONCE listened to a speaker who went on at some length to state that the only qualification for his position was experience. He implied that, as far as he was concerned, this was sufficient. For him, experience was as good a teacher as formal education, if not better. Although we would be the first to admit that one can find many outstanding examples of men and women who have successfully reached high positions without the benefit of an extensive formal education, we believe these same people would have been even more successful if they had had more formal training.

Scholastic achievements are in themselves no substitute for experience—this goes without saying. But

experience can be a good, bad, or indifferent teacher. We would suggest, moreover, that in our complex society both training and experience are needed to produce the type of person who will be successful not only in his chosen field but also as a citizen of Canada and the world.

"The material progress of Canada", said James Muir, chairman and president of the Royal Bank of Canada in a recent *Monthly Letter*, "is the product of the imagination and spirit of her people. These can be stirred and made effective only through education. By education I do not mean learning for learning's sake, but education to train the mind to think, to reason, to explore, and above all to continue to educate itself so that there will be created a well of knowledge from which to draw not only inspiration but the technique of performance and production".

"How sad it is", he continues, "to see a man come along in his vocation to the point where he is called upon to make plans, to direct the work of men and to put into words the visions he sees of improvement and advancement—only to discover he has not the background or facility. The necessary factual information can be picked up on the job; what is wanted is training in basic principles."

The purpose of education is to teach a person to think. To think means to reason intelligently with confidence in one's knowledge and skill. It includes also an awareness of one's ignorance. Education must give a sense of perspective and provide standards by which values—one's own and those of others—may be judged. Perhaps most important of all, it gives a fund of knowledge from which ideas may be born. It is the soil of creativity and without creative thought we cannot advance technically or spiritually.

It has now been conclusively proven that age does not affect the ability to learn in the slightest degree. One can, in fact, teach an old dog new tricks, and if he refuses to learn them, then he is denying himself the chance of development and self-realization. He is, moreover, denying his best to the work he has chosen.

Perhaps a man has used a certain technique, a procedure, or a method of business administration for a number of years without knowing that there is a better one. Perhaps he feels that to seek further education might be interpreted as a sign of weakness or incompetence. He could not, in our opinion, be more wrong. Although formal education in itself is no absolute guarantee that the person who has been subjected to a given course of instruction will necessarily possess sound judgment, it is, on the other hand, one of the best yardsticks we can use to evaluate competence. The operation of a modern hospital, whether small or large, is a relatively big and technical business. We cannot afford to entrust the lives and health of patients and big capital investment to incompetent people.

Young people today who are interested in becoming executives or business managers have a great advantage over many people who have been in the field for years, for today excellent formal courses are available. Many older administrators, however, who have the will even at this date to take further training, find that their responsibilities to their work, their families and their community seem to forbid their entering into a new educational venture. This is true of administration in general, and of hospital administration in particular. If an executive cannot avail himself of the opportunity for formal training in hospital administration, he need not bemoan his fate and decide nothing can be done about it. We

are greatly impressed with the increasing number of adults who are taking some form of education while they carry on with their regular work. For a number of years, the Canadian Hospital Association has been giving such an opportunity to people in administrative positions in hospitals through the correspondence course in Hospital Organization and Management. Across Canada each year some 80 people take this opportunity—some have a formal educational background as low as Grade Eight, and some possess university degrees. Although all of us have met in the course of our lives exceptional people who have literally educated themselves through wise and wide reading, the great value of the extension course in the hospital field is that it sets out a rounded curriculum, with reading schedules and assignments which have to be met at stated intervals.

When this editorial went to press, some 145 students in the first and second years of our course in Hospital Organization and Management were attending the annual summer session. Perhaps this feature is the most outstanding in the whole course. There are certainly many aspects of hospital administration that can be explored better through a discussion in class than through a lesson read alone at home. Besides this, the students can listen to many speakers of varied backgrounds and associate with other students from all parts of Canada.

It has been a continued source of gratification and even amazement to your editor to observe an *esprit de corps* among the students of the summer session as high as any I have witnessed. One has to ascribe this largely to their diligence, determination and their will to improve themselves. It speaks well for the kind of people we have in hospital administration in Canada.

Vital volunteer

AT THE recent convention of the Maritime Hospital Association, several of the guest speakers emphasized the importance of voluntary effort to hospitals. It is important, too, in the life and work of hospital associations. The president and the executive of the Maritime Hospital Association had a happy thought when they included in the report on their sixteenth annual meeting (1958) a picture and salute to their secretary-treasurer, Gladys M. Porter, M.B.E. Thus is recorded for the future in the permanent minutes of the association the grateful appreciation of the M.H.A. for the outstanding contribution of Mrs. Porter. Appointed treasurer of the M.H.A. at its first annual meeting in 1943, she later assumed the office of secretary-treasurer. Thus for 17 years Mrs. Porter has virtually been the administrator of the M.H.A.

Mrs. Porter indeed exemplifies the voluntary spirit which has been so important in the development of the community hospital. And she does this while carrying on many other community activities—she has been mayor of Kentville for the past ten years and president of her hospital auxiliary for the past 20. The text of the M.H.A. tribute will be found on page 12 of this issue.

We are pleased to publish this salute to Mrs. Porter which we know she deserves. We also believe her work is typical of the work which many women do for our hospitals throughout Canada. We believe that it is only through a continuation of such voluntary service that our hospitals will continue to thrive as community institutions.

FIRST of all, may I either discard the title of my address* or at least interpret its intent as I see fit. I do like the idea of utilization of staff. Where essentially human matters are concerned, man has complicated tremendously his main business of living by the invention of a language that always gets him into trouble. That's probably why we have universities, which argue about what we really do mean—and seldom find out.

It is an unquestioned fact that in our particular and peculiar North American version of culture, hospital administration has become one of the major undertakings among us. Hospital administration, for good or ill, is something we are stuck with and have to take seriously. We find it difficult to put the clock back to the time before our present conception of hospital administration had been conceived—or forward to the time when the present concept of the hospital will have disappeared, except in historical records; or at least will have changed radically. At the moment we are faced with a burgeoning conception of hospital administration and we cannot turn a blind eye to it any more than we can ignore television, space travel, hoola hoops or the Conservative party.

Hospitals may in future be large or small; located in major centres of population or in villages (if villages survive); made easily accessible to relatives and friends of the patient or otherwise. They may be part of the community, or may exist as leper colonies and lunatic asylums stuck up in North Battleford or on Southampton Island. But as long as we have doctors, we are likely to have hospitals. And in the here and now we say that hospital administration is big business. It is big business in the context of the business of living—and dying.

As a result of recent, current and presently anticipated social policies, the undertaking known as hospital administration is likely to expand considerably. We are faced with that, too. There is here an apparent analogy with our suddenly expanded concep-

Dr. Line is a professor of psychology at the University of Toronto. He presented this address at the O.H.A. convention, October, 1958.
*How to Utilize Staff More Effectively.

In personnel work:

"Notice the need to be noticed"

William Line, M. Ed., Ph.D.,
Toronto, Ont.

tions of military service (particularly in two world wars); with equally suddenly expanded conceptions of education, from the few to the many (and quite recently from the many to the many many); and in industry, to the whole world.

Whenever these relatively sudden expansions of an idea take place, the administration falters; the traditional practices creak. They need oil—psychological oil—or reconception. Therefore, in consequence of this inevitable expansion, the hospital as a functioning social organization needs to look beyond its achieved high level of competence as a treatment centre, and examine more succinctly its personnel and human relations problems.

It seems to be characteristic of any institution that it first addresses itself to competence in the job it sets itself to do. Since modern conceptions of organization involve increasing numbers of people partnering the job, there inevitably comes a time when the institution finds inadequacy in the living, human process, quite apart from competence and skill.

Perhaps those in hospital administration might learn from the analogies of expansionism in education, politics, (including international civil services) industry and the like. I think they can, but they must be very careful in their quest to do so. For much that, in industry, for example, goes by the name of being business-like, is responsible for a good deal of chaos, confusion in human affairs and social conflict. In that sense, let us please avoid being business-like.

If you study carefully the evolution of personnel matters in modern industry, I think you will

find that the most significant thing was *not* the techniques of job analysis, job specification and evaluation, tests and measures of aptitude and efficiency, or even supervisory training, but rather the extraordinary importance, to any member of the organization, of being noticed. During the now famous researches into organization conducted at the Hawthorne works of the Western Electric Company some thirty years ago, the men and women who were the subjects of the inquiry were found to be responding in what were judged to be positive ways, not to administration-management acts in themselves, but rather to their perceptions of being noticed. This may seem to be so obvious and simple as to be hardly worth mentioning. We know the need of children to be noticed; we have seen to it that each child has his own name and other indications of his unique identity. Yet it took industry and industrial psychology decades of research, even into human motivation, before the dynamic meaning of this simple fact was itself noticed.

A second thing that industry has done, which we didn't think necessary to do in social institutions such as the family and the school, is to set up personnel departments. True, these departments usually grew up as management devices for purposes of examining potential employees or appointees, and the special skills required on the job. The examinations of our schools and technological institutions were not adequate in all cases of specific employment. These personnel departments, having once been set up, particularly in times of expanding organization and mass production by the masses, multiplied within themselves until their manifest busy work became

a by-word of house building. For they became an excuse for management to consider that the human aspects had thus been taken care of—one of the most costly mistakes ever made.

But not in all cases. In the more enlightened industrial organizations, there has emerged a conception of the personnel department as a group of thoughtful people—real leaders in our culture—who are given time and opportunity to reflect carefully on the nature and development of man as he associates with his fellows in productive work. Education has long been thoughtful about man's life and development in leisure; and it has to some extent taught some of the essential skills required in occupations. But nobody had really taken the work situation as a problem of living and development, a problem requiring the most critical thought and offering in our culture the greatest challenges to culture, until this type of conception emerged.

If you want to know what I am talking about, there are several such personnel departments operating here in the city of Toronto. For the sake of brevity in illustration, I will refer to only one—Dr. Macmillan and his group at Canada Packers. Here are people, employed not as specialists, not because they happen to know something about psychological and sociological tests and measurements, job analysis, wage structure and so on, but because they are thoughtful human beings. They have that quality of social concern, social leadership, that Professor Thompson of the Institute of Business Administration at the University of Toronto calls "over-all-ness"—a quality we all too seldom develop even in our education for leisure policies.

Such personnel groups as these are well worth our study in any administrative councils. Rather than thinking in terms of clichés, such as "motivation", "morale", "team", "organization" and the like, they focus their attention on persons in organizations. They are trying to avoid "not noticing"; they seek the meanings of what persons do and say, indeed the meanings of feelings as well as actions. As Professor Farrell Toombs has said: "The significance of 'noticing' may be appreciated in any manifestation of human activity, whether in so-

called scientific search and enquiry, or in the ostensibly casual incidents of everyday intercourse."

They can do this only if they are neutral to the staff-line, management-worker divisions of function, and the like, and if they have the courage, the fortitude, the "over-all-ness" qualities so necessary to our quest for understanding man himself.

And so I come to the core of my theme. Are we to share Whyte's view of the Organization Man, in its gloomier aspects? Are we to express the type of despair so poignantly cried by T. S. Eliot in his contemplation of industrial London:

A cry from the North, from the West,
and from the South,
Whence thousands travel daily to the
time-kept city,
And my word is unspoken!
In the land of lobelias and tennis
flannels,
The rabbit shall burrow, and the
thorn revisit,
The nettle shall flourish on the
gravel court
And the wind shall say:
These were a decent, god-less people.
Their only monument the asphalt
road
And a thousand lost golf balls.

Are we to echo such despair? Or are we to see administration in more satisfying human terms?

What I now have to say, in accepting the second as the only alternative for us, will apply to hospital administration or elsewhere. My first affirmation, or belief is that no institution has the right to exist if it does not take as its prime object the development of its members as human beings. Industry may see its task as the production of goods, hospitals may see theirs as the healing of the sick. But even more basic, I believe, is the development of all members in their potentiality for being human.

Secondly, social institutions are man's own attempt to create a social milieu which is conducive to the development of that potential for being human. Thus man creates the image, the idea, of family, and then implements it. And thereby appears, in all cultures, a social milieu whereby all members of family get an experience in depth, emotionally. He creates the image, the idea, of school, and implements it. And thereby all members can get an experience in depth, intel-

*"Motivation and Morale in Organizations", by F. C. Toombs, University of Toronto, (unpublished paper).

lectually. He creates the image, the idea, of industry, (and of hospital) and implements it. And thereby all members can get an experience in depth, in regard to the social purpose of work.

Why does he do this? Primarily, because man cannot develop alone. He demands society. He is constantly creating new social images, some of which he implements, some of which he finds not satisfying, but others which offer and afford the satisfaction of his own experienced development. A hospital can be justified on the basis of public demand for health rather than disease. But only in part, and not even fundamentally. If life in hospital, whether as patient or doctor, nurse or attendant, administrator or sweeper, does not enhance the basic living qualities of its members, it lacks its main *raison d'être*.

Secondly, it is in society that man finds his weaknesses. He is always born the youngest member of his society—a society that has evolved a long way and is still far from completely satisfactory, a society not of his own choosing, but one in which he can participate, helping it to grow and develop as he himself develops in it.

But he immediately, as an infant in arms, begins to find himself capable of fighting against some of the things he finds, of withdrawing from others or accepting others. He finds these alternative capabilities in the presence of still others. Even before he can know much in any communicable intellection, he feels—and he expresses these feelings to those around him. He may go through life in this type of confusion, and we call him emotionally immature, unstable. If his pattern is one of constant or over-frequent aggression, or withdrawal, or of mere apathetic acceptance, we may call him mentally sick—for he is. If these patterns are somewhat under control, he may still learn to do some of the things we want done in our schools, our factories, our hospitals or other institutional organizations. But he still isn't developing his full potential as a human being.

In much of our personnel administration, we try to protect ourselves from the discomforts and disruptions of over-aggressive, over-withdrawing, or over-apathetic, uninterested and uninteresting associates. Or we try to place them where the negative, unsocial or even anti-social forms of

(Continued on page 72)

ASSINIBOINE HOSPITAL

Indian Rehabilitation Unit

the first year
of a
new policy
of
integration

E. Locke,
Winnipeg, Man.



Time in the classroom rounds out the work day and provides a chance to catch up on much-needed education.

IN a period less than one third the life span of the average Canadian, the Indian has progressed from a dying race to the fastest growing ethnic group in the country. The battle against diseases such as tuberculosis which took such a devastating toll among Indians, has not been completely won, but certainly the tide of warfare here has turned. However, these people now face new problems. The rapid increase in population, combined with the decline in their traditional economy, is forcing the Indian to seek employment off the reserves, where higher vocational standards are making it increasingly difficult for the unskilled.

Many of the more able-bodied have found employment in mines or the construction field, and a concerted effort is now being made to provide those who are still young enough to attend school with the education necessary for them to compete with other Canadians in the more skilled trades and professions.

The author is Indian Rehabilitation Officer with the Sanatorium Board of Manitoba, Winnipeg, Man.

But what of those young adults, physically handicapped, who are incapable of heavy manual labour, and for whom the emphasis on education came too late?

In November 1956 the Sanatorium Board of Manitoba, in co-operation with and at the request of the Indian Affairs Branch, Department of Citizenship and Immigration, Indian and Northern Health Services, Department of Health and National Welfare and the provincial Department of Health and Public Welfare, agreed to undertake the development of a rehabilitation program designed to meet the needs of all disabled Indians.

In undertaking this special program it was not desirable (nor was it necessary) to divorce it from the non-Indian programs. The object was integration and it was felt that this could be accomplished best by using existing facilities where possible. In view of the success of programs like that of the Sanatorium Board for the rehabilitation of the non-Indian tuberculosis patient, and that of the Society for Crippled Children and Adults for other disabled persons, it was apparent



The switchboard—one of the many opportunities the hospital offers for practical assessment.



Training adapts native talents to practical vocations—witness this young sign painter.



This mechanic, like many others, is taking advantage of apprenticeship training.



Others can receive training on the job. This rehabilitant learns in a garment factory.

that the facilities for physical restoration as well as academic and vocational training were adequately meeting the need in these areas. However, experience with Indian patients in sanatorium had shown that, although many took advantage of the in-sanatorium pre-vocational program, few achieved academic levels enabling them to accept the post-hospital opportunities. Of those who did, few completed training, and fewer still achieved lasting success. When the reasons why this should be were examined, it was concluded that the key to the rehabilitation of the Indian was social development.

It was felt that to plan and achieve realistic goals which would help these Indians live as full a life as possible, the rehabilitants must first be helped to

gain an understanding of the opportunities which lie within the scope of their individual capabilities. They must learn what will be expected of them should they choose to live off the reservation, so that they can develop patterns of social behaviour which would permit them to live comfortably and effectively in their new surroundings.

In February 1957, two boarding homes were established in Winnipeg. In homelike settings, under the supervision of house mothers, efforts were made to teach social rules. However, although these homes produced a degree of conformity, it was soon apparent that the step from the reservation or hospital to Winnipeg was too great. The strict supervision necessary bred resentments, and denied responsibility and self-disci-

pline. Those who conformed most readily were often found to lack the initiative and self-confidence necessary to success, whereas those who possessed these qualities often presented disciplinary problems while in the homes.

During the latter part of 1957 plans were formulated for the establishment of an Evaluation and Social Orientation Unit at the Assiniboine Hospital, Brandon. The location of this unit, with its proximity to the less metropolitan city of Brandon, has proved extremely advantageous. The hospital provides medical care and assessment and offers opportunities for vocational training and assessment. It also provides a sympathetic initial introduction to non-Indian society. The city of Brandon too has helped make the rehabilitant aware of the many

vocational and social advantages of an urban community. The response of the community has been most gratifying, and the rehabilitants have not lacked invitations to participate in community activities. Thus they have been introduced to non-Indian society at a good level and in a more natural manner.

Counselling, films, visits to industries, and informal talks by local businessmen have stimulated interest and provided a knowledge of vocational opportunities as well as having emphasized the importance of good work habits: punctuality, reliability and self-discipline. An active program at the Y.M.C.A. has improved not only their physical health but their mental outlook.

In the unit direct supervision is kept to a minimum. Through group and individual counselling the rehabilitants are taught what is expected of them, and they are encouraged to express their opinions. In this manner they enter into all decisions, whether it be the selection of proper clothing or the choice of a vocational goal.

During the first six weeks in the unit there is a gradual change in the rehabilitants, but following this initial period the change is sometimes quite dramatic—as if suddenly the individual's whole pattern of living comes into focus. His outlook broadens, he develops an air of self-confidence, and he displays a more mature attitude toward others. The majority of those who have passed through the unit show a sense of pride in it. It appears to provide them with a feeling of belonging, and after



Music is a healthy outlet, and when not producing their own, ardent record fans keep the unit alive with everything from rock 'n roll to waltzes.

graduating, the majority return for visits and correspond regularly with the staff.

But the rehabilitation unit is only a stepping stone between the hospital and the reserve on one hand, and the non-Indian society on the other. Although the rehabilitant leaves the unit with an increased understanding of how to deal with the problems which he will meet in the urban community, it is only natural that situations will arise with which he is unable to cope. He is encouraged to rely on his own resources and, in most cases he does so after the first few months of employment. However, close contact is maintained by the rehabilitation officer for at least the first year.

Of the 30 people who have been accommodated in the unit during this first year only five have failed, all while still in the unit, and all during the first six weeks. It is also interesting to note that of the 54 physically handicapped Indians placed in employment during the period from February 1957 to December 31, 1958, 45 are known to be still employed, many for periods of 18 months or more, in a diversity of vocations—from office workers and watch repairmen to auto mechanics and machinists. It is still too early to draw any definite conclusions on whether or not the program is bringing about the lasting social change envisioned, but the evidence to date is encouraging! ■



After a year of being lived in, the lounge reflects the pride the rehabilitants take in the unit.

The present status of

Tuberculosis in Canada

ANYONE who forecasts what is going to happen to tuberculosis in Canada in the next 25 years is certainly risking any reputation he may have as a prophet. At no time during the 25 years I have been in this field have there been a greater number of unpredictable factors to be weighed. However, as I have never thought much of my power as a seer and have never aspired to fame in that line, I'll make some guesses based on the information we have.

At first glance it looks as if the disease is retreating all along the line. Will the retreat become a complete rout? We would like to think so, but a good many of us have a feeling that a pronouncement to that effect would smack of hope rather than experience.

Ours is a century in which much is said, and said with confidence, about "dying diseases". Recently the chairman of a regional hospital board in England, when asked to provide some necessary reconstruction for a V.D. clinic, replied, "We don't want to spend money on these dying diseases". Undoubtedly there are some who are wondering how soon we will have that attitude toward tuberculosis. They are ready to meet such an idea half way for the very understandable reason that they have a good many uses to which they could put the 40 million dollars that tuberculosis costs us yearly. Although I sympathize with them, I do not believe that a search for added funds is a sound reason for deciding that a disease, once worse than it is now, should be put on the "dying" list.

However, it would be both unkind and unfair to suggest that it was only desire to divert funds which prompted the idea that tuberculosis might be dying out.

The author is the executive secretary of the Canadian Tuberculosis Association. This article was prepared in December, 1958.

G. J. Wherrett, M.D.,
Ottawa, Ont.

Yet we may still be inclined to think that when we hear people suggesting that its defeat is inevitable. For we know that there has been an average of 9,000 new cases yearly for the past five years. Popular optimism seems to be confounded by stark statistics.

I think the great gulf between rosy presumption and hard fact is worth a few minutes' thought. We are usually harder headed than this. Why, in this matter, are we so complacent?

My own explanation is that we all grew up with our thoughts about tuberculosis dictated by its death dealing potential. Until the introduction of new drugs and the advances in surgery which have marched with them, we used the death rate as the measurement of success or failure. That was how the public measured the tuberculosis threat too. It is going to be a while before people become accustomed to measuring the problem by the number who are ill. Already, however, it is interesting to note quite a few magazine and newspaper articles which begin with rejoicing about the lowered death rate and then, a few paragraphs farther down, start talking about the number of new cases still appearing.

For purposes of this discussion we could, perhaps, try to assess the problem from three points of view. First, that of the clinician, who is interested in the disease as a medical problem and in the patient as a person. Then we will consider how the epidemiologist or health officer is concerned because of the effect of tuberculosis on the community. We should also try to put ourselves in the position of the administrator who has to find the money for the services required. He is probably the most skeptical

of the lot about the imminent disappearance of the disease. He is aware that the cost of providing services, far from diminishing, is, in some cases, increasing. Expenditures for operating provincial sanatoria for the past three years, for example, have progressed as follows: 1955—\$31,132,850; 1956—\$32,000,000; 1957—\$32,148,000. If you tell a person who is constantly having to find more and more money to cope with a disease that it is dying out, it is only to be expected that he will mutter "That's what you think."

It should be noted, however, that the number of non-tuberculosis cases admitted to tuberculosis hospitals increased from 2,541 in 1955 to 4,159 in 1957. Since the cost of these is still included in the tuberculosis costs, there is an inflated figure in some institutions. Where it has been possible to convert an institution completely to other uses there is a definite reduction in the budget for tuberculosis.

From the standpoint of the epidemiologist, the most striking feature of the present picture, in contrast to that which confronted him ten years ago, is the dramatic drop in the death rate. Deaths have fallen to the lowest figure on record. In 1947 there were 5,559 deaths, which meant a rate of 44.3 per 100,000. Ten years later in 1957 the number of deaths was approximately 1,100 and the rate was 7.1 per 100,000. There was a reduction in all forms of the disease and particularly in tuberculosis of the meninges and central nervous system. These used to be from ten to fifteen per cent of the total. They are now under five per cent.

Regrettably there is not the same change for the better in the number of new cases. The rate is dropping, but more slowly than we hoped. We should not be too disappointed—it is inherent in the nature of tuberculosis that it steals a march on us. So let us gratefully note that the reduction of cases per year from 10,000 in 1952 to 9,000 in 1957 shows that the infection rate has been influenced by our persistent efforts at control. And let us remember that the reduced number of cases is in a population which has increased by one third since the end of the war.

Although the actual number of new cases has not fallen greatly, there has been a decided fall in the number of beds required for treatment. This is mainly because the use of antibiotics and resection surgery has resulted in a reduction

in the length of treatment. The average for Canada in 1954 was 371 days. In 1957 it was 310 days. The reduction in the length of treatment is particularly noticeable because there are few of the advanced, hopeless cases, who used to spend years in the sanatorium.

To the individual patient the fact that the time spent in hospital has dropped two months is not very impressive. It still looks very long to him. But to administrators reducing the average length of treatment by 60 days is important. It would mean, for example, that on 9,000 new cases well over half a million hospital days are saved.

Actually, the number of beds in use has fallen sharply. The peak was in 1953 when we had 18,977 set up on December 31 of that year. On December 31, 1956 the number had fallen to 16,678, and on the same date in 1957^{*} it was down to 15,900*. Beds no longer needed for tuberculosis patients have been used for various purposes—orthopaedics, paediatrics, geriatrics and even obstetrics, depending on the needs of the community. Some obsolete buildings have been destroyed.

I have mentioned several times the new cases reported. Perhaps this is the point at which we should remind ourselves that they do not make up the total of patients by any means; their number in sanatorium is swelled by re-admissions.

What was the actual number admitted? (see below).

You will note that re-admissions remain a serious problem. There has been little change in numbers in the past five years, unless it is a tendency to increase. For every three patients admitted for the first time there is one who is making a return trip. We must be prepared, I think, to expect this ratio to be maintained, because the pool of former patients is expanding by about 8,000 yearly. Consequently, even though the rate of relapse decreases, we cannot expect the number of re-admissions to shrink quickly.

To sum up—deaths have been greatly reduced, but actual numbers of new cases are falling much more slowly and the number of re-admissions remains high. Fewer beds are required, not only because incidence is gradually falling but because the length of treatment has been reduced.

Tuberculosis has always been a

costly disease—and it looks as if it will keep on being costly for quite some time. The saving in money that might have been expected to result from shortening the period of in-sanatorium treatment has been offset by rising wages and higher prices which inevitably pushed up the cost of treatment. The 1956 figure of \$32,003,000 for the operation of provincial sanatoria was the highest on record.² When the sum needed for federal institutions is added to this, it seems likely that the total will be around forty million. However, there should be a definite saving in 1958, as some buildings have been closed or converted to other uses.

Clinician's Viewpoint

Since most of the new cases found in Canada are treated for some time in our institutions, I think that an analysis of the reports of newly-admitted cases will give us as good a clinical picture as we can expect to get.

I have not been able to analyze the 1957 figures, but for 1956 the figure, as already mentioned, was 9,131. Of these, 8,483 (that is 92 per cent) were of the respiratory type, including pleurisy.

Of the other forms, the most common is genito-urinary. Bone and joint tuberculosis comes next. It is interesting that these two manifestations of the disease have changed places in frequency of occurrence. Ten years ago there were twice as many cases of tuberculosis of bones and joints as of genito-urinary. Now the proportion is reversed. Next to these forms comes lymphatic tuberculosis, and well down on the list now is tuberculosis of the meninges and central nervous system.

The same diagnostic pattern was found among the 4,093 patients re-admitted.

One striking change is in age groups. For all Canada in 1946 about 20 per cent of admissions were over 40 years of age. Ten years later 35 per cent of admissions were over 40. Ontario's records show that in 1925 only nine out of 100 patients had passed their fortieth birthday but, by 1945, 42 per cent belonged in the over-40 category.

There is a good deal of speculation as to whether or not there is an actual increase in tuberculosis in the older age groups. There are some who suspect that there is not an increase in disease among older groups but only in our efforts to find it. There is also the possibility that part of the disease increase in older people is the result of reactivations in that constantly growing body of former patients who, naturally, are all getting older. Then, there is an increase in the proportion of older persons in the population. Therefore, a third possibility is that they contribute more cases of acute disease just because there are more of them.

My own guess would be that all these factors are involved. But whatever the cause, the inference is plain—when respiratory symptoms appear in aging patients, the chance that it might be tuberculosis should never be ignored.

Now, where do our new cases of tuberculosis come from, and who is mainly responsible for the diagnosis?

By far the greatest number are coming, as they always did, from the practising physicians. The diagnosis is often confirmed at a chest clinic, but the disease was first found or suspected by the patient's private physician who sent him to the clinic.

Next in importance is the group found by routine examination of the contacts of known cases. They are usually discovered by periodic check up of the patient's contacts over a two-year period.

Routine surveys of high incidence areas and of groups with a higher-than-average rate of tuberculosis are another notable source of new cases. It is essential that such groups as our Indians and Eskimos be examined routinely, and the energy with which the federal government has carried out its diagnostic program over the past ten years is most commendable. The striking reduction in the incidence of tuberculosis among our Indians and Eskimos attests the wisdom of this course.

Surveys of industries and of communities have also been most useful. Their special virtue is not in the quantity of cases found so much as in the fact that, since

No. of Cases Admitted

	1955	1956	1957
First Admissions	10,163	9,131	9,331
Re-admissions	3,927	4,093	4,005
Total	14,090	13,224	13,336

*For references see bibliography, page 87.

they cover persons who feel quite healthy and in no need of consulting their doctors, the cases found tend to be in the early stages. Treatment therefore begins at an earlier stage of the disease than usual. This is a distinct advantage.

Routine examination of hospital admissions has protected unavoidably exposed persons, such as nurses in training and medical students. Of course in many hospitals this effort to protect the staff is reinforced by a program of BCG (*Bacille Calmette-Guérin*) vaccination of students who are negative to tuberculin. The combined program has brought about a great reduction in the number of nurses falling ill. It therefore relieves directors of nurses and administrators of what was once a great source of anxiety.

In assessing the diagnostic picture for some years to come I would say that medical practitioners are still going to find a good deal of tuberculosis in their practice. I do not see how it can be otherwise. I know how easy it is to fall into the habit of doing simplified mental arithmetic, of saying, "9,000 new cases of tuberculosis, and 7,000 doctors, why that isn't two cases per doctor per year." This reasoning disregards the pool of former patients. In the past ten years 117,000 patients have been discharged alive from Canadian sanatoria. Of this number 40,000 have been readmitted from time to time. A little consideration of such numbers leaves slight doubt that the family doctor cannot yet forget about the possible diagnosis of tuberculosis. These thousands of persons will appear in doctors' offices during the years to come. They will be admitted to hospitals with other ills and the possibility of reactivity of their disease should never be forgotten. The need for watchfulness is sharpened since the use of drugs is, after all, comparatively recent—we have been using them for only ten years. The permanence of the cures in which they were an important factor has not been established. I wish I could report that we had a reliable laboratory test for activity, but I cannot. Clinical judgment is still the vital factor.

As far as protection of the public is concerned, the sputum test is still our most important tool. We are a little uncertain about the risk of infection right now. Once upon a time we had some very sick persons discharging great doses

of bacilli. These were extremely dangerous—but the danger did not go on indefinitely, because when you are dead you are not disseminating tubercle bacilli. What we have yet to learn is the effect of a great many people spreading a few germs each.

The tuberculin test is becoming steadily more important and its importance will continue as infection rates drop. There will also be increasing numbers, especially among children and young adults, whom there is no need to x-ray. Whether or not a chest x-ray is needed can easily be determined. It is satisfying to note that infection rates are lower than they were a few years ago. However, we had better not be smug about it, since even in rural areas on the prairie where rates are low, 30 per cent of the population is still positive. The stream of infection is far from dried up.

Status of Treatment

Changes in treatment in the past ten years have been radical and dramatic. Streptomycin went into general use in 1948 and was followed shortly by para-aminosalicylic acid and later isonicotinyldiazine. These three, with several others apparently of minor importance, have worked a miracle in the outlook of the tuberculosis patient. Prior to the introduction of drugs, even with the best sanatorium care and the use of collapse therapy (either pneumothorax or thoracoplasty or its modifications), the long-term mortality was still very high. Most follow-up studies, no matter where conducted, indicated that in ten years' time at least 50 per cent of patients were dead and the prognosis worsened according to the stage of disease on diagnosis.

In 1947, one in four discharges from institutions in Canada were by death. In 1957 the figure was less than one in twenty. This is a victory of science over the microbe which could hardly have been envisioned by the most optimistic at the end of the war.

The drugs have not been the sole factor in bringing about this change. Surgical procedures have altered almost beyond recognition. At the end of the war pneumothorax was the most generally used surgical treatment. Recently I read a book on tuberculosis written in 1957. The author devotes a chapter to pneumothorax but he begins it by saying that he wonders if in 1957 pneumothorax should be

included. Nobody questioned the value of this procedure when we had none better; but it had its defects, most notable of which was the number of complications. The chief of these was emphysema. It was a matter of weighing its disadvantages against its life-saving potential. We are glad to be able to change to procedures which do not involve the same risks.

The advent of antibiotics has changed the surgical picture in radical fashion. In 1946, there were 56 resections performed. By 1957, the number increased to 1,271, since dangerous foci of disease can be eliminated by removal of a segment, a lobe or even a total lung. As the large number of salvage cases is getting cleaned up there should be a drop in the number that need resection.

Antibiotics have brought a miracle in treatment, but they also introduce some problems of their own. Improvement is usually so rapid that there is a temptation to neglect other features of care which are still necessary if improvement is to be permanent and complete. There is a tendency to neglect rest and to seek early discharge from sanatorium. There is a temptation to try home treatment. Home treatment would be possible if the same rules of conduct as laid down for institutions were followed. Experience shows that all too often the patient and the family are unable to maintain the status of invalid for one member in an otherwise healthy household. Not only is it hard to get the patient to stick to a regime of enough rest, it seems to be unexpectedly hard to get him to use drugs as prescribed. Failure to keep on with drugs as the doctor ordered is one of the reasons for those re-admissions which I mentioned. In many instances these are examples of failure of home treatment.

The research trials carried on by the British Medical Research Council and those conducted by the Veterans Administration of the United States have established the necessity of long-term use of drugs—from one to two years, depending on the case. They also attest the value of using the drugs in combination.

One of the clearest analyses of treatment failures has been made by Professor John Crofton of Edinburgh.⁹ As a result of his studies, he has outlined a number of treatment regimens based on certain

(Continued on page 85)

A CENTRALIZED press relations office operating on a 24-hour basis is the key to good press relations. This office should be under the control of a capable member of the administrative staff. The director must be thoroughly familiar with the hospital routine, must be able to distinguish between matters suitable for publication and those which are confidential, and must possess good judgment and tact in order to avoid endangering a patient's health or legal rights. But to make a profitable use of press relations, the director must maintain an active and positive press relations program and a well-defined and well-enforced press code.

Here at St. Joseph's we have a strict press code. Articles for publication are reviewed by the press relations director well in advance of the release date. Information on hospital facilities and achievements and items of human interest are released to the press as soon as hospital authorities deem it advisable to share such details with the general public. Accreditation reports and recruitment data are always open to the press, as are details of important personnel changes. All accidents are reported to the press, in whole or in part as soon as the patient is admitted. If necessary, reporters are instructed to withhold information until permission to release it is granted. It is always kept in mind that the hospital has an obligation to respect the rights of the patients. The press relations director obtains additional pertinent information on patients when necessary and checks the condition of the critically injured by personal contact in anticipation of press calls. It is the duty of the director to obtain signed permission for photographs and to arrange for interviews with the patients when requested by the press. The press relations office tries to offer impartial courtesy and frankness to all press representatives, including photographers. A file is maintained at the press director's desk for ready reference at all times. This file contains a current condition sheet on all accident cases in the hospital and completed current accident reports. When the victim of a serious accident is admitted and eventually becomes a fatality, the press appreciates notification

Sr. M. Cleophas is the press relations officer at St. Joseph's Hospital, Hamilton, Ont.

At St. Joseph's Hamilton

Good Press Relations

**Sister Mary Cleophas, C.S.J.,
Hamilton, Ont.**

of the death as soon as the next of kin have been notified. Appreciation is expressed to the press from time to time for some specially worthwhile press publication. The press office at this hospital covers the assignment from 8 a.m. to 10 p.m. and from 10 p.m. until 8 a.m. the emergency room staff releases essential information, thus providing 24-hour service. The recognized hospital press spokesman must have the intelligent co-operation of all departments. In this way only will a centralized press office represent a saving of time for other key personnel in the hospital.

Once the press code has been established, the director must decide what is news, and then devise the quickest and most accurate method of releasing this news to reporters. Hospital news includes any hospital program, service, or occurrence. An accident, a new medical technique, new departments or equipment, new personnel, a significant statement of hospital policy—all these are news. Stories which possess human interest because they involve prominent people, describe singular occurrences, reveal exceptional devotion to duty, or are filled with humour or pathos serve as a magnet to attract public interest to what is going on within the hospital walls. The press director must remember the purpose of a good press relationship—to keep the general public informed about the services which the hospital provides for the community. He must also be able to evaluate any press release, not only from the standpoint of the hospital, but also from that of the reporters and the general public.

Accident cases provide the most accurate gauge of the efficiency of

the hospital press office. Within minutes of an accident, sometimes even before the ambulance has reached the emergency entrance, the reporters will be on the telephone clamouring for details. To meet this situation, it is a good plan to provide the emergency room, x-ray department and admitting office with special press release forms containing space for all pertinent details, such as the patient's name, address, age, the extent of his injuries, the "how, where, when and why" of the accident, the name of the driver of any car involved, the name of any police officer investigating the case, and the patient's authority to release the information to the press. When an accident case is admitted, these forms can be completed and forwarded as soon as possible to the press office. If the department is too busy to complete the forms or if the information is not available immediately, a telephone call to the press office makes the director aware of the accident and prepares him at least to confirm that the accident victim has been brought in and to state that further information will be released as soon as it is available. In this way, the reporters are saved the inconvenience of trying to locate elsewhere the hospital to which the accident victim was taken. If permission has not yet been granted for the release of information on hand, the facts may be given to the reporter together with a request that they be withheld until authorized. Then as soon as the authorization is given, the reporter is in a position to publish the details.

In addition to articles, the press is interested in photographs. If the picture is of an accident victim, someone whose life has been saved by some new technique, or a prominent citizen, the press

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Let's Look at a Laundry

a multi-million dollar project
at the Vancouver General Hospital

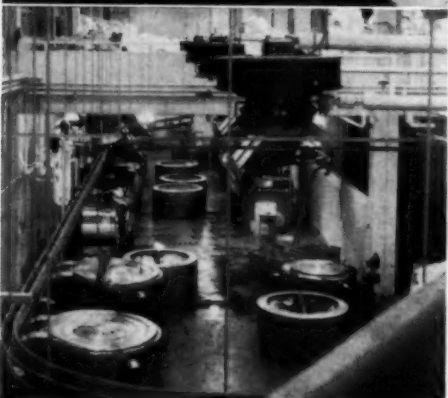
J. N. Robertson,
Vancouver, B.C.

WHAT would be the ultimate in laundry facilities to provide service adequate to meet the needs of one of Canada's largest hospitals? This was but one of the myriad questions confronting The Vancouver General Hospital's board of trustees and administration when they were considering a multi-million dollar project for renovations and construction which was eventually to give to the hospital its new Centennial Pavilion (with an occupancy potential of 504 beds), a new emergency department of 25 beds, and a new laundry for which capacity and design had yet to be determined.

The hospital had always operated its own plant. As the hospital grew, so did the demands made upon the laundry, and to cope with the situation over the years changes were made to equipment and the service was expanded wherever possible. But future demands were recognized as greatly exceeding the capabilities of the existing department. How to meet the need?

The answer to that one question is apparent today in the more than 30,000 square feet of thoroughly modern and completely functional plant which went into operation at The Vancouver General Hospital, the heart of British Columbia's medical centre, last November. This laundry provides clean-linen service also to the B.C. Cancer Institute, the B.C. Government Health Clinic, The University of British Columbia Faculty of Medicine and

Mr. Robertson is public relations director of the Vancouver General Hospital.



Top to bottom: 1. Soiled linen is brought to this part of the mezzanine floor for sorting and marking. 2. Laundry manager George Gilbert (r) orients one of the employee groups before the switchover. 3. A 210-ft mono-rail with motor driven hoists carries loaded baskets to extractors, tumblers and shaker. 4. Tumbler pre-conditions large pieces of linen for the ironers. All three conveyors have photo-electric eye to stop belt at the ironer.

the B.C. Medical Research Institute. It is the result of detailed planning applied to a predetermined concept that the only satisfactory plant would be that whose design would be based upon three major considerations:— economics, service and control. When operating, it should be capable of an average weekly output approximating 122,000 pounds.

In the hard light of economics, every cost dollar involved in construction and operation must be returned in terms of practicality and work output. Adequate service pointed to the necessity of an on-site location plus functional lay-out enabling maximum response to the clean-linen demands of the entire hospital. Control of linen processing as directed by the hospital's medical staff must be fully assured.

Out of these considerations, and many others, final plans evolved and excavation for the total project got under way in August of 1955. In something less than three years from that date, in spite of unanticipated upheavals resulting from labour unrest, The Vancouver General Hospital has added to its service-facilities Canada's largest institutional laundry and one of the most modern plants on the continent.

But length, width, height or floor area of a building are no criteria upon which to take the true measure of the service of a hospital or any one of its departments. Only in terms of performance can a real estimate be made of the

hospital's worth to the community it serves. The importance of the rôle of a laundry department in a hospital's total program of patient care was therefore recognized as paramount. There was no doubt in the minds of those responsible for planning, that The Vancouver General Hospital's new laundry must come up to the highest possible standards. Consequently, in planning over-all lay-out, types and installation of equipment, there could be but one objective—efficiency.

In the months which followed, stress upon this all-important factor, efficiency, never diminished. The result is a plant designed to facilitate work-flow, where every possibility of delay has been eradicated and duplication of effort obviated. To accomplish this, mechanical devices of the latest design, test-proved, have been employed, guaranteeing minimum operating costs, assuring maximum output.

As important as may be the mechanical aspects of the plant, the human side of the operation is no less important. Conditions which foster a happy employee atmosphere, bolster morale, and reduce fatigue in work where repetitive action tends to produce weariness, were considerations receiving top priority. Attention has been given to the provision of the best possible working conditions for the employees from the standpoint of adequate ventilation, lighting, comfort and safety. Fresh air intake from windows has been supplemented by duct ventilation. Ele-



Cantilevered office for manager.

vated windows are electrically controlled and lighting units are the most efficient industrial types. A large, attractively appointed lounge for rest periods adds to the amenities which include washrooms, lavatories and showers in the latest decor, and individual lockers.

The new laundry is a building 220 feet long and 100 feet wide—22,000 square feet, with a mezzanine floor of approximately 5,000 square feet, to which all soiled linen is brought via underground tunnel and freight elevator for marking and sorting. Then by gravity flow loading it goes to the wash floor from which it is routed to various areas of the main floor



Sixteen tandems of four press units are used for pressing nurses', doctors', and lay staff uniforms. In the upper corner is a special revolving sorter for sorting nurses' personal bundles from the press line.

for processing. This is the principal area of laundry activity, combining nine basic areas:

Washfloor	2,000 sq. ft.
Extraction	1,200
Rough-dry dept.	1,300
Flatwork	4,200
Pressing	4,200
Sewing room	1,100
Marking room	200
Linen storage and distribution	2,200
O.R. linen preparation	2,200

The washfloor is equipped with six 400 lb. capacity automatic washers for general bulk linen. A two-speed washer for blankets and miscellaneous linen, and an open-end washer for special items are also used. A washing formula control mechanism automatically initiates each cycle of the washing operation. When washed, the linen is emptied into extractor baskets from the automatic unloading washers. Through this process 50 per cent of the moisture is removed. Of the total volume 60 per cent of the production is finished by flatwork ironers, 30 per cent by the rough-dry department and 10 per cent by the pressing department.

By means of an overhead hoist the flatwork linen from the washfloor is delivered to a preconditioning tumbler, and from here, by means of a conveyor belt system, to the linen spreaders attached to the flatwork ironers. Three eight-

roll ironers are in operation: two ironers with attached automatic folders at the ends handle the majority of sheets, bed spreads and other large items; the third ironer, with attached small linen stacker, processes the remaining small items requiring an ironed finish. Exhaust hoods are installed over the flatwork ironers to exhaust the steam issuing from the damp linen as a result of the ironing process.

Thirty per cent of the washfloor production goes through the rough-dry department. The hot air tumblers process diapers, baby linen, bath towels, doctor's gowns and other material requiring a soft, fluffy finish.



A section of the women's lounge which provides a restful atmosphere. Here staff take full advantage of rest periods.

The remaining 10 per cent of production, consisting of starched wearing apparel — uniforms, et cetera—is delivered to the pressing department by an over head conveyor. Two conveyors are used to carry the finished uniforms from the presses to the folding tables for folding. Uniforms are then sorted into personal bundles.

The entire production from all the departments converges on a conveyor which runs the length of the building and delivers the finished uniforms and linen to the storage and distribution areas.

A well-lighted linen repair department is located adjacent to the flatwork department. Operating room linen bundles are prepared daily in the laundry. Among the smaller, miscellaneous machinery installed are sock dryers, blanket and curtain dryers and pillow renovators. A set of water heaters is installed immediately next to the laundry to supply the many thousands of gallons of hot water required. Adequate space is provided for laundry supplies, engineer's work shop, cotton goods storage and other facilities.

A unique feature of the plant is the location of the laundry manager's office and general office area, which is cantilevered over the main floor. Completely walled in by glass on three sides, it provides the manager with an unobstructed view of the entire operation. With the aid of an intercomm system, he is at all times in direct control with key positions on the floor.

With an eye to the future and expansion always a possibility, provision has been made for additional services and machinery if and when the need should arise. ■



Three 8-roller ironers handle most of the sheets, bed-spreads, and other large items. Small items needing an ironed finish are processed here also.

UNTIL a few decades ago, the engineering and maintenance department of a hospital had been sadly neglected. Only space which could not be used by other departments was allocated for this one. Personnel requirements were poor indeed. As long as a man could stoke a fire and do some general repair work around the building, he qualified as the hospital engineer. Few attempts were made to keep equipment in top-notch shape through preventive maintenance. Gradually, with the advances made in medical and applied mechanical sciences, the rôle of a competent and qualified engineer was recognized as vital if the hospital was to give the best possible care to the patient.

Briefly, the purpose of this department is to provide services of light, heat, repair and maintenance necessary for care of hospital facilities, and to create a pleasant and comfortable physical environment for patients, employees, medical staff and general public.

Let us break this down into a number of specific functions: (a) the maintenance, repair and operation of all equipment, machinery and distribution lines concerned with steam and hot water, plumbing (including waste disposal), the electrical system (power and lighting, including emergency lighting), refrigerator service, fire detection, prevention and fire fighting methods and devices, carpentry (including furniture repair), painting and decorating, vertical transportation equipment (elevators and dumbwaiters), and communication and mechanical messenger systems; (b) ground maintenance and landscaping; (c) safety; and (d) miscellaneous—insect and rodent control, ambulance and trucking services, planning and supervising plant protection, and window washing.

We can see that this certainly covers a wide field of services. We shall not attempt to discuss all of them. Instead we shall discuss some of the more important and necessary services, and then the general administrative problems common to the majority of engineering departments.

Good maintenance starts with the original planning of the hospital. If proper and adequate provisions are made, the hospital

will usually function smoothly. However, in most cases, this is not so. Mistakes in planning are often made and are very costly. Systems are installed but often they are inadequate and no sooner is the hospital officially opened than the engineers are busy making necessary changes, repairs and alterations.

Let us start with the heating system in the hospital. The heating system should be designed to maintain a temperature of 72° Fahrenheit in bedrooms, corridors and service areas. It is not practical to design a heating system for a higher temperature and then to reduce bedroom temperatures by regulating valves. The temperature in operating room, recovery rooms, nurseries, delivery rooms, and similar spaces should be 80° Fahrenheit. The additional heat required to maintain this temperature can be supplied by auxiliary radiation connected to the high pressure system or through the ventilation system.

Authorities agree that the constant, uniform temperature required in most areas can best be maintained at the lowest operating cost, without noise, by the use of a hot water heating system. Vapour systems of heating require more maintenance than hot water systems because the life of traps is limited, uniform control is more difficult, and noises may develop. Considerable savings can be made in installation and operation by insulating the exterior surfaces of the building, providing double glazing and weather stripping.

After calculating the heating and steam processing requirements, the boilers should be selected at normal rating. To this must be added reserve capacity to ensure continual operation in case a boiler is out of service. If the entire plant is operated from high pressure steam boilers, three boilers, each rated at a minimum of 40 per cent of the total load, are preferable to two. When two boilers are used, each boiler should be rated at a minimum of 66 per cent of the total load. Boilers rated at 125 pounds working pressure are required for the laundry. The U.S. Public Health Service estimates that boiler capacity may be estimated roughly at 1 h.p. per bed when the heat is figured at zero temperature.

A Guide to Engineering and Maintenance

Peter Swerhone,
Winnipeg, Man.

Two-thirds of the boiler capacity is required for heating and one-third for hot water, laundry, sterilizers, and so forth. Heat requirements may be roughly estimated at one square foot of radiation to 80 cubic feet of space for uninsulated buildings. When the walls are well insulated, the size of the heating boilers and radiators can be reduced approximately 25 per cent. If, in addition, the windows are effectively double glazed, the size can be reduced by 50 per cent or approximately one square foot of radiation to 160 cubic feet of space. Some authorities feel a half h.p. per bed is sufficient and this could be still lowered by overcoming six basic faults in many heating plants: (a) the building lacks insulation and leaks "like a sieve"; (b) there is too much radiation; (c) there are too many radiators; (d) steam radiators are either too hot or too cold; (e) there is excessive boiler capacity; and (f) boilers are run at 1/3 or less capacity for half the year, whereas economical operation is with an overload.

There are two general types of boilers. One is the fire tube boiler in which the hot gases pass through tubes which are surrounded by a large volume of water. The second type is the water-tube boiler in which the hot gases of combustion circulate around the tubes which are filled with water. Water tube boilers can be operated at a greater overrating than fire tube boilers.

Oil or gas burners are most generally recommended today and should be used unless the cost

Mr. Swerhone is assistant administrator of the Winnipeg General Hospital, Winnipeg, Manitoba.

Hospital Size	25 beds	50 beds	100 beds	150 beds	200 beds
Boiler and Pump Room	600	900	1200	1400	1500 sq. ft.
Engineer's Office	—	—	80	100	120 sq. ft.
Maintenance Shops	125	130	200	300	350 sq. ft.
	725	1030	1480	1800	1970 sq. ft.

of these fuels exceeds the combined cost of coal and labour of handling. This method of firing will eliminate the noise and dirt caused by coal and ash handling. Smaller oil installations require equipment capable of relighting after the flame has gone out. Larger installations can make use of the semi-automotive oil burning equipment where heat is controlled by regulating the oil and air supply to the burner.

Automatic stokers are more economical than hand firing because they burn a lower grade of coal and save labour. Coal burning equipment requires facilities for removal of ashes along with adequate ash disposal.

Accurate supervision of boiler room techniques can be assured by providing steam flow recording meters, steam pressure recording gauges, CO₂ recording meters, flue gas temperature recorders, and indicating draft gauges. Water which is being fed to the boiler should be analyzed to determine type of treatment required to prevent scale and corrosion. Water softeners will not eliminate this danger in all cases.

Plumbing

Now let us consider plumbing and waste disposal. Adequate provision for both of these functions should be made in the original construction plans. In selecting a hospital site, consideration should be given to water supply and sewage disposal. A site which is near a sewer of ample capacity and has a satisfactory water supply should be given preference even when it is more expensive. When a sewage disposal system must be constructed, the provincial health agency should be consulted about requirements, type and design before the site is chosen, in order to ensure a satisfactory location of sufficient size for the plant. Because of high initial and operative costs of sewage treatment plants, connection to an existing sewer system is usually more economical even though lift pumps or connections of considerable length are required. When a sewer is available, its elevation and capa-

city should be checked. The site of the building should be set to permit gravity drainage to the sewer if at all possible.

Where no community sewer system is available, adequate treatment of the sewage from the hospital is necessary. The object of sewage treatment should be to prevent contamination and possible infection of a source of water supply, either surface or underground; to prevent possible spread of disease by rodents and insects; to prevent a nuisance condition from offensive odours; and to prevent destruction of aquatic life. The quantity of sewage from even a small hospital is so large that disposal by sub-surface irrigation is not practical except under very favourable soil conditions.

Roof, court, drive and areaway drains should generally be discharged into a storm water sewer, a natural drainage course, or to dry wells wherever local conditions permit.

Disposal of garbage is a problem to be handled by the engineering department. Total refuse from a hospital, exclusive of ashes, may amount to several pounds per day from each individual. Of this, food wastes will constitute one half to three quarters of a pound. Several methods of disposal are: burning all or nearly all, with the exception of food, in a hospital incinerator; disposal through the sewage system where a garbage grinding device is used; giving food to hogs after it has been sterilized by boiling; and burying garbage.

The hospital water supply should be taken from a public system wherever one is available and can meet the maximum demand. The purity of the water should be determined by the provincial officer of health or some other recognized agency. If it is found unsuitable for drinking, provision should be made for a treatment plant. Two water services should be brought into the building from two street mains if available to provide emergency service. The minimum quantity and pressure of water available should be checked accurately as

this will affect water supply piping. Should they be inadequate, the structure of the building might be affected because a roof tank might be required. The mineral and chemical content of the water should be determined so that pipes which will resist corrosion can be selected.

If the pressure in the street water main is not sufficient to supply the fixtures on the upper floors, a tank with duplicate pumps may be necessary. At times, it is advisable to supply the laundry and first floor fixtures from the street main and pump the water for the upper floors.

Where a public water supply system is not available, water wells should be considered instead of surface water which would require a treatment plant and constant supervision. In all such cases, the provincial health agency should be consulted.

The water pressure should be adequate to maintain a minimum of 15 pounds pressure on the upper floors when the maximum number of fixtures that will be in operation at one time are supplied. If the pressure on lower floors is greater than is permissible for quiet operation (approximately 40 pounds) reducing valves should be employed.

It is advisable to use two combination hot water heaters and storage tanks with horizontal submerged copper "U" tube heaters. The tanks should be made from materials which will give continuous service for a maximum period of time. One tank should normally be used for the laundry, dishwashers, and kitchen, with a water temperature of 180° Fahrenheit and the others, with water at 150° Fahrenheit for the hospital fixtures.

For general hospitals the minimum hot water requirements that may be expected are 4.5 gallons per bed per hour for the laundry, 0.4 gallons per bed per hour for the kitchen, and 5 gallons per bed per hour at 150° Fahrenheit for the hospital. The storage capacity should be not less than 80 per cent of the heater capacity.

Meters on the water main from the street, on the cold water to the laundry and on the cold water connection to the water heater serving the laundry permit a satisfactory check to be made of water consumption.

Gas piping for ranges and

similar equipment should be approved, installed and tested as required by the gas company and local regulations. Piping of anaesthetic gases to operating rooms from a central point is not recommended. Should a central oxygen supply be used, special manifolds should be connected with copper tubing in accordance with the requirements of the company that will furnish the oxygen. Oxygen tanks should be in a locked closet or room near the delivery entrance.

Many hospital noises are caused by the plumbing systems, but most of these can be eliminated by observing common preventive measures in locating and designing the piping systems. Water and drain pipes should be located away from patients' rooms whenever possible. Fixtures should definitely not be placed against parti-

tions between patients' rooms.

Electrical Provisions

We shall now consider the electrical provisions of the hospital as the third major service provided by the engineering department. Electrical power can be supplied to the hospital either from its own generators or from an outside source. The one which is more economical depends entirely on conditions and must be decided by local study. In general, power which is available commercially is cheaper and more satisfactory, except in the northern areas where boilers must be fired for heating purposes throughout the greater part of the year.

The electrical service should be brought into the building underground, when possible, to avoid interruption and unsightly poles. Where available, two services

from independent generating plants should be used—one for normal use and the other as a breakdown or emergency service. If the capacity of one source is limited, it can be used as the emergency service. These two services should be tied together with an automatic throw-over switch which will throw all or part of the lights onto the emergency line in the event of interruption. The emergency services should have sufficient capacity to supply the operating, emergency and delivery rooms, stairs and corridor lights and exit lights. When a second outside service is not available, a battery or automatic generator should be used for the emergency lights. The gasoline or diesel driven generator is preferable in large hospitals, as it is difficult and expensive to maintain properly a large storage bat-

University of Toronto Students in Hospital Administration



Shown here are the 1958-59 students and members of the staff, Department of Hospital Administration, School of Hygiene, University of Toronto. Having completed the academic year of the post-graduate course, the students will spend the next 12 months in administrative residencies at hospitals in Canada or the United States where arrangements have been made for their future instruction.

In the back row, from the left: C. E. Dosdall from Quinton, Sask., who will study at the St. Catharines General Hospital, St. Catharines, Ont., under the preceptorship of E. C. Robinson; D. Fish from Toronto, Ont., who goes to the Toronto East General Hospital, Toronto, under E. Willcocks; J. Haslehurst from Long Branch, Ont., to the Hamilton General Hospitals, Hamilton, Ont., under Dr. H. Appleyard; W. Mattersdorff from Toronto, to the South Peel Hospital, Cooksville, Ont., under R. Copeland; Dr. F. MacHattie, from Halifax, N.S., to Women's College Hospital, Toronto, under D. Macham; H. Mullins from Riverside, Ont., to the Hamilton General Hospitals, Hamilton, under Dr. H. Appleyard; and Dr. J. Medhurst, Victoria, B.C., to the Toronto General Hospital, Toronto, under Dr. J. E. Sharpe.

Second row, left to right: Dr. H. J. Bright, from Toronto, who goes to the Hospital for Sick Children, Toronto, under Dr. G. Currie; E. Stefanuk, North Battleford, Sask., to the Winnipeg General Hospital, Winnipeg, Man., under Dr. L. O. Bradley; J. Segalla, Manchester, Conn., to the Monmouth Memorial Hospital, Long Branch, N.J., under G. Bartel; Dr. H. McDonald, Indian Head, Sask., to the University Hospital, Saskatoon, Sask., under Dr. A. L. Swanson; Dr. D. Gee, Edmonton, Alta., to the Royal Alexandra Hospital, Edmonton, under Dr. D. Easton; and R. Thorfinnson, Saskatoon, Sask., to the Humber Memorial Hospital, Weston, Ont., under R. B. Ferguson.

Front row, left to right: R. E. Builder, assistant professor; K. S. McLaren, assistant professor; Dr. G. Harvey Agnew, professor and director; Eugenie M. Stuart, associate professor; Dr. W. Douglas Piercey, assistant professor; R. B. Ferguson special lecturer; and J. E. Osborne, from Ottawa, Ont., who will go to New Mount Sinai Hospital in Toronto under S. Liswood.

tery. Batteries can be used to eliminate light flicker when the generator is starting. A separate transformer should be used for x-ray apparatus.

A three-phase, four-wire, 110 to 220 volt system of wiring is cheaper than other systems and has more advantages. With such a system, any lighting can be used to supply both three-phase and single-phase current. Automatic breakers for power and light feeders and for light circuits are more expensive than fused switches; however, they are more desirable. Recommended illumination for the hospital varies from a minimum of five foot candles for corridors, stairways, nurseries, to 1,000 foot candles for the operating rooms.

Refrigeration also comes under the engineering department. The size of boxes is determined by the number of patients and personnel to be served, and the frequency of food deliveries. The availability of markets and the buying policy of the hospital will determine whether deliveries will be made daily or weekly. The small hospital, with frequent delivery service, may operate satisfactorily with free standing reach-in boxes. Where walk-in boxes are desired, there should be at least two—one for meats and the other for vegetables, fruits and dairy products. For a larger hospital, three walk-in boxes are recommended to permit separate storage of dairy products. Separate boxes must also be used for frozen foods as they require lower temperatures than do other foods.

Flake ice machines are also in general use as they are more sanitary and save labour. The flake ice should be discharged into an insulated icebox which can be refrigerated for storage.

Safety

Fire safety is one of the hospital's biggest responsibilities to the patient. Few patients are ever worried about fire hazards in a hospital as they are more concerned with their own illness. The engineering department can help in the fire prevention program by eliminating as many danger spots as possible. It should:

1. Avoid hazards caused by overtaxed or otherwise inadequate heating systems.

2. Keep furnaces, fireplaces, chimneys, smoke pipes, and breechings free of combustibles.

3. See that chimneys and in-

cinerators are properly constructed to contain the flames and gases.

4. See that there is ample clearance between adjacent structures to avoid exposure to fires.

5. Keep exterior openings protected, when necessary, to prevent the entrance of fire (e.g. a grass fire).

6. Isolate flammable and explosive gases and liquids.

7. Construct roofs so that they will be resistant to sparks and flying brands.

8. Make provision for the restriction and control of smoke and noxious gases.

At least two safe and separate means of leaving should always be conveniently available to every occupant of the building. Exits may be of the following types: stairways, horizontal exits, passageways, doorways providing direct exit to a street or to an exterior open space leading to a street, and ramps.

A good rule to follow is that the maximum distance from the door of any room to the nearest exit should not exceed 100 feet.

The local fire department should be consulted to determine the requirements for the stand-pipe system. Hose and siamese connections must have threads to fit those of the local fire department. The flush type of fire hose cabinet, with a glass front, is advisable. Chemical extinguishers set in recessed cabinets should also be provided at accessible points on all floors and, if possible, should not be more than 100 feet apart. For storerooms, kitchens, shops, laboratories and all areas that are not under constant supervision, automatic sprinklers are desirable.

Communication

Now a brief word on communication systems. The number and speed of the elevators should be determined by the bed capacity, the type of food service, the number of visitors, and the hospital plan. In small hospitals which do not employ mechanics and electricians familiar with elevator equipment, inspection and maintenance should be provided by contract with an elevator service organization. If the elevators are serviced by the hospital staff, regular inspections must be maintained. The electrical equipment should be checked every day and the mechanical equipment every week. The entire installation should be thoroughly checked once a month. Signed records of each

inspection should be kept by the hospital.

Dumbwaiters of the full automatic type are used for the distribution of medicine and hospital supplies to the various floors and for carrying patients' trays.

Intercommunication telephones should be provided for all department heads, assistants, operating and delivery rooms, nurses' stations, offices, housekeeper, doctors' rooms, record rooms, and diet kitchens.

Telautograph systems which transmit written messages from one department to another are being used successfully in some hospitals in this country. The electrical wiring is installed by the hospital and the instruments are furnished to the hospital on a rental basis. The first cost and rental charges are relatively high which accounts for the limited use of these systems.

Audible speaker systems, with microphones and loudspeakers, are in common use.

Pneumatic tubes are extremely useful for carrying records, prescriptions and orders from one department to another.

Maintenance

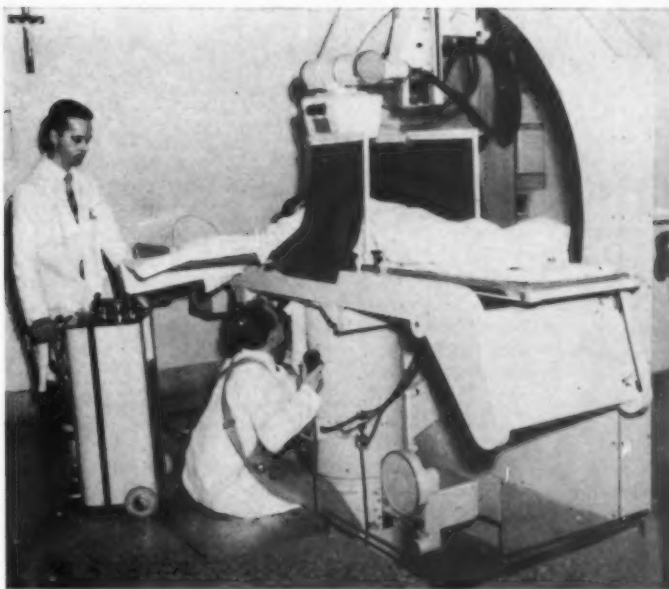
This, in general, covers the engineering or mechanical side of the department. We shall now discuss the maintenance shops and their organization. Most repairs and replacements can be made by hospital employees at a reasonable cost; and with adequate shops, the mechanical plant will be maintained in better working condition. On the other hand, space and equipment for a shop should be limited to that which can be justified by the value of the work done as compared with outside costs.

Maintenance falls into two main divisions and comprises the costs for repairs, upkeep and replacement of the structure of the building or buildings, fixed equipment and grounds, and the furnishings and movable equipment.

While the hospital is being "used", many matters connected with maintenance and repairs present themselves—walls, roofs, floors, doors and windows; painting and decorations; heating, plumbing and electrical installations; hardware; parts of structure where moisture may infiltrate; equipment and furnishings; drives, walks, lawns, and shrub-

(Continued on page 76)

Cineradiography



—Photo courtesy Philips Electronics Industries Ltd.

L AVAL Hospital, Quebec City, has something new in the x-ray field. It is a powerful x-ray apparatus through which their radiologists can watch bright, moving pictures of the heart, respiratory system and other internal organs, which was installed at the hospital recently with the aid of federal and provincial grants. Two electronic units, which intensify the brightness of ordinary fluoroscopic images 1,000 times—to make pictures as bright and large as those on an eleven inch television screen—and a built-in mirror cine-camera for recording the action of internal organs on 35 mm film, are main features of the equipment.

The intensifying unit enables the radiologists to prolong their examinations without subjecting themselves or their patients to excessive radiation. The camera, which allows the action of internal movements to be seen slowed down as well as speeded up, will help the doctors to observe more closely rapid and complicated actions. Films of these pictures can be made without darkening the room.

At Laval, where its operation is supervised by the hospital's medical director, Dr. Alphonse L'Espérance, the new apparatus is being used for medical research and instructing students as well as in clinical practice.

A unique vacuum tube, the

front end of which is a special fluorescent screen in close contact with a photo cathode, provides the means of intensifying the brightness of the x-ray images. When x-rays impinge on the screen the photo cathode converts the light into an electronic beam which is amplified 1,000 times and projected onto a smaller screen. The mirror optical system magnifies the view of this second screen.

Patients under examination are strapped to a moveable tray which can be fixed in any position. The x-rays can thus be directed through the body at almost any angle wanted. A special desk is also part of the installation at Laval. An assistant seated at it is able to control the many electrical and camera adjustments while the radiologist deals with the patient.

This method of recording x-ray pictures, known as cineradiography, is expected to aid greatly the study of speech defects in particular, since the screen of the eleven inch intensifier can give films showing all the speech organs working together. And, of course, Laval expects its new machine to assist in diagnosis in many other fields. Cardiology, gastroenterology, internal medicine, urology, thoracic surgery, pulmonary diseases, paediatrics, orthopaedics and general practice all hope to benefit from this innovation. ■

At Laval

something new
in the
x-ray field

What do you know about

Poison Control Centres?

by

Robert J. Imrie, M.D.,
Toronto, Ont.

THE concept of poison control centres grew out of the sub-committee on accident prevention of the American Academy of Paediatrics. It had long been realized that there was a definite need for complete information and treatment centres for the large number of accidental poisoning cases occurring all over the United States and Canada. When we realize that over 300 Canadians die annually and 15 children die yearly in Ontario due to accidental chemical poisoning, we have on our hands a major public health problem. It was only five years ago that the first poison control centre was established. It had its origin in Chicago in six participating hospitals which pooled all the information they had gleaned on accidental poisoning cases. From this meagre beginning grew 200 poison control centres in the United

States and approximately 35 in Canada. Needless to say, the first people the sub-committee consulted were the pharmacists in these participating hospitals.

Where should the centre be located? Who should run it? How many antidotes were currently available? Could the pharmacists supply information on new preparations as they appeared on the market? These were just a few of the important problems the hospital pharmacists answered.

The hospital apothecaries contributed greatly in getting the poison control centres off on the right foot, and I may add that one of the first people I contacted when we instituted the poison control centre in The Hospital for Sick Children in April, 1957, was our own chief pharmacist, Mary Braiden.

You now see why. I look upon

the hospital pharmacist as the pulse beat of the poison control centre.

From the earliest ages there has been attached to the subject of poison an interest and importance both deep and easily understandable. The mysterious and terrible power of dealing death in a cup of wine, a dish of food, a breath of perfume, or by the scratch of a poisoned weapon, combined with the absence of antidote or the lack of any certain knowledge of the poison's action, the terrible pain and swift death, has fascinated.

In the fall of 1956 the Food and Drug Directorate of the Department of Health and Welfare in Ottawa first investigated the possibility of establishing poison control centres in Canada. Dr. Ray McDougall and Dr. George Lucas, the professor of pharmacology at the University of Toronto, did much of the original work. They developed various reporting forms and a system of approximately 5,000 poison information cards. These cards were divided into three groups with three distinct colours. The buff coloured cards contained all the proprietary products on record in Ottawa with a list of their ingredients—(not necessarily the percentage composition)—with the most toxic ingredient listed first. The white cards included all the insecticides, pesticides and common household preparations. The green cards listed the known treatments and the various signs and symptoms associated with these potentially toxic constituents. This information is sent by Ottawa to the provincial Departments of Health; the province then re-allocates them to the various centres.

You might ask, what does a poison control centre do?

It receives enquiries from hospitals, family physicians, the lay public and various community agencies. We have had calls from Brampton, Oakville, Barrie, and many other surrounding towns asking about particular drugs or household preparations. When a parent telephones, we ask him specific questions to determine how toxic the substance ingested might be. If it is not an acid or an alkali,

Dr. Imrie is director of the poison control centre at the Hospital for Sick Children, Toronto, Ont. He gave this address to the Ontario branch of the Canadian Society of Hospital Pharmacists in October, 1958. This article also appears in the May-June issue of "The Hospital Pharmacist" by arrangement with that publication's editor and the author.



At The Hospital for Sick Children, Toronto—ready reference.

we instruct the mother to make the child vomit immediately and then to telephone her family physician at once. If she is unable to contact him we suggest she take the child to the nearest hospital, if they live in the extremities of the city; if they live in the downtown area, they are asked to bring the child immediately to our emergency department.

When a physician telephones, we give him every bit of available information we have on file on that particular product.

A poison control centre provides to practising physicians and hospitals reliable, up-to-date information on the toxic ingredients in chemical substances. It makes available diagnostic facilities as indicated and recommends modes of therapy.

Besides the 5,000 cards, we have in our centre a small toxicology library. One book in particular has given us considerable assistance—*Clinical Toxicology of Commercial Preparations*, by Gleason, Gosselin and Hodge. *The Symptoms and Treatment of Acute Poisoning*, by G. H. W. Lucas, professor of pharmacology; and *Accidental Poisoning in Childhood*, by the American Academy of Paediatrics, contain a great deal of helpful information, and the *Modern Drug Encyclopaedia and Therapeutic Index* helps to keep us up-to-date with the nearly 1,000 new products that come onto the market each month in the Dominion of Canada.

In some patients we measure the salicylate level of the blood, in others we measure the phenobarb concentration in the blood serum. We are now co-operating with the American Department of Public Health on a survey of the treatment of kerosene poisoning. We take 5 cc of blood, haemolyze it immediately and send it to the Esso Research Laboratory in New Jersey, where a test has been developed to determine the aromatic fraction of a petroleum distillate in venous blood. Whenever new treatments come onto the medical scene we introduce them in our poison control information cards.

In the past year we have used with some efficacy Bethyl B-methylglutarimide for the treatment of phenobarbital intoxication. Because tranquilizers are in such wide use today, we have had cases of their accidental ingestion. It has been reported that methylphenidate hydrochloride (Ritalin), a central nervous system stimulant,

has been used in cases that have developed coma by overdosage with chlorpromazine meprobamate or other tranquilizers. Although we have used Ritalin in a few cases, further reports concerning the effectiveness of it in treating acute tranquilizer agent intoxication are awaited with interest.

With the emergence of resistance to chlorinated hydrocarbon insecticides, the organo-phosphorus anticholinesterase compounds are being used with increasing frequency. Intoxication from improper use and accidental ingestion has been reported. The development of quaternary ammonium anti-cholinesterase compounds with an intermediate duration of action has improved the treatment of myasthenia gravis but again intoxication with these compounds occurs. As you know, anti-cholinesterase poisoning produces muscarine-like, nicotine-like and central nervous system effects. The only treatment we have used has been atropine which does alleviate the muscarine-like action but has no effect on the muscular weakness or paralysis. I am sure some of you are aware of the acute haemolytic anemia which results from poisoning by various agents such as naphthalene, ingestion of the fava bean or inhalation of pollen from this plant, or ingestion of primaquine phosphate. Recent laboratory investigation has revealed that the individuals who have the acute haemolytic anemia have a deficit of glucose 6 phosphate dehydrogenase activity and a low level of glutathione. Incubation of their erythrocytes with acetylphenyl hydrosine results in a marked fall of reduced glutathione. It is considered that this defect is genetically determined and possibly transmitted by a sex-linked gene. This work explains the presence of acute haemolysis in only some of those individuals who have ingested naphthalene, the fava bean or primaquine and may lead to a better understanding of other haemolytic anemias.

It is evident that with new products constantly emerging, more research into the pathophysiology produced by toxic substances is necessary so that rational and effective methods of therapy can be instituted.

Our poison control centre makes complete epidemiological investigations by means of follow-up reporting and home visiting by public health nurses. This is a

very important aspect of the complete problem of poison control. In over 80 per cent of our cases there is a follow-up visit by the public health nurse in the community to determine the how, why, when and where of accidental ingestion. The Public Health Department appreciates the opportunity of visiting these homes because quite often they find other situations that are worthy of their attention. Pregnant women in need of pre-natal visits, young children in homes that have not been completely immunized, older chronically ill patients who need hospitalization, and many other problems peculiar to public health work. All the epidemiologic data are carefully collected, tabulated and analyzed by type of poison, age, sex, colour, locale, season, time of day, type of activity, type of treatment, preventability, et cetera along with many other interesting aspects of each particular case. When all this information is gathered it attempts to form sound preventive measures based on facts obtained, including appropriate therapy, corrective labelling, standardization of dosage, packaging and precautionary measures to be employed in homes and industry. Probably nowhere in medicine is the old adage, an ounce of prevention is worth a pound of cure, so true as in the prevention of accidents in general and accidental ingestion of chemical poisons in particular.

The simple solution of having all drugs and medications in a locked cupboard would go far in preventive technique. We believe there may be some value in simply listing the name of a particular chemical compound on the label of a package to assist those who are treating the patient. I realize there is an old tradition, a good tradition, that is well established between the pharmacist, physician and patients, and I realize that pharmacists do not divulge the name of the medication that has been prescribed to the patient, but surely there must be some way that we could circumvent a part of sacred tradition for the tremendous value it might prove to be in severe accidental ingestion during the middle of the night.

Our poison control centre provides consultant services to other existing, newly created and planned poison control centres throughout the country. We frequently receive letters from other areas in

(Concluded on page 74)

Start setting up a program for—

Fire Safety in the Hospital



Don't let this be your hospital.

FIRE has recently struck, suddenly and disastrously at practically every type of building except the hospital. Hotels, garages, apartment houses, factories, stores, restaurants and a variety of other buildings have had fires in varying degrees while our hospitals have remained relatively "fire-free". This is indeed remarkable. It is all the more so when we realize that few, if any, large industrial plants or other establishments, contain under one roof the wide variety of fire hazards, the high fire potential, of the average hospital. For example, where else do you find large laboratories, paint shop and spray booth, wood-working shop, oxy-acetylene welding, inflammable liquids in quantity, acids, explosive gases, large kitchens and laundries, large storage areas for hospital records and supplies, electrical hazards, and air conditioning for carrying smoke and gases throughout the building. There are also heating plant and ammonia refrigeration, plus the common hazards of a large hotel with its highly combustible contents and furnishings, and many people smoking—visitors, employees and patients, the latter in their beds. Individually, each occupation is a

Mr. Blickstead is a fire consultant in Montreal. He gave this address at the first annual meeting of the Quebec Hospital Association in March, 1959.

C. L. Blickstead,
Montreal, Que.

serious threat in itself. Combined they represent a very high fire potential indeed.

With such a background, one would expect a much higher incidence of serious fires in hospitals, yet the general over-all record for the past few years has been good, at least in Montreal.

How do you explain it? In a number of cases it is preparedness, in others, sheer luck. When we realize the fire potential in a hospital we may consider ourselves fortunate that fires are not more serious than they have been, and that no lives have been lost, albeit they have been threatened. *Every* fire in a hospital is a threat to the safety of the patients.

As an administrator, you should be prepared to meet any fire emergency in your hospital. You should have a fire safety program and a plan of procedure so that when fire strikes, your personnel will know exactly what to do and do it. If you don't have a plan then it is time you started doing something about it. I exhort you, in the interest of the patients who lie helpless in your hospital, to set up immediately a fire safety program that will meet all emergency requirements.

What should this program consist of?

Fire Prevention

You should start off with a concerted drive to rid your hospital of all possibility of fire, through rigid and regular inspections of all areas, laboratories, operating rooms, workshops, storage, kitchen, laundry, pharmacy and the rest.

Check on all areas where inflammable liquids and gases are used to see that excessive quantities are not stored, and that proper protection is provided. See that bottled gases are safely stored and used.

Check on housekeeping and regularly disposed of combustible rubbish. See that motors and machinery are clean.

Check the laundry for lint accumulations; elevator shafts and pits for cleanliness; the kitchen for grease accumulations, especially in the hood and filters. Check machinery spaces, cleaner's closets and so on.

Check on supply stores and other storage areas, as well as in all out-of-the-way places for rubbish, and have it removed. Once the hospital has been cleaned out, keep it that way through frequent inspections—at least once a week to begin with, and monthly thereafter.

Electrical defects are a common cause of fires. Special care must always be taken to see that the electrical system is always maintained in top condition. Open junction boxes, and panels, combustibles in transformer rooms, overloading of circuits, worn and frayed electric cords, loose connections, dirty motors and gear, temporary wiring, over-long extensions, and so on, all cause fire. Regular inspection must be carried out.

Smoking is the greatest cause of fires everywhere. In a hospital the problem of smoking has become an acute one. With the exception of the nursing staffs, smoking has become prevalent in many of our hospitals, and something will have to be done about it. Unlike department stores, there is no by-law, at least in Montreal, which governs the practice of smoking in hospitals. However, no by-law is needed if the administrator decides there will be no more smoking in his hospital. When it comes to the safety of your patients, *you* are the law.

Smoking should be entirely eliminated from hospitals with the exception of certain specified areas where it may be permitted, such

as in lounges, cafeteria, and smoking rooms. This will require a hospital regulation, strictly enforced. The rule should apply to all employees, interns, nurses, medical staff and visitors with no exception but the patients. Patients will smoke, and probably take chances so that it will be better to give some leeway in that direction. However, before sedation, all the patient's smoking materials must be removed for his own protection.

Some doctors will smoke and so will the interns when they see the older men do so. This is tolerated in most hospitals, yet the nurses would be severely reprimanded or discharged if they were caught smoking on duty. Personally, I do not believe that any nurse would want to smoke on duty judging from those I have met. In any case, doctor or nurse, no one has the right to expose others to the dangers of fire. There should be no privileged class when it comes to fire safety.

Patients must not be allowed to smoke in rooms where oxygen is being administered, and television or radio should not be operated in the presence of oxygen. In addition, the regular signs that are normally placed on oxygen cylinders and tents when in use, prohibiting smoking, oil, et cetera, should be bi-lingual.

Fire Protection

This consists of extinguishing equipment, fire alarm and, to some extent, exits, smoke barriers and fire escapes.

(a) I have found that little attention has been given the matter of suiting the fire extinguisher to the type of hazard it is to protect. One often finds extinguishers of the water type in areas where it would be extremely dangerous to use water, such as hazards of an electrical nature. In other cases, extinguishers intended for inflammable liquid fires are found protecting hazards of the Class A category.

Often extinguishers installed are far too small in capacity for the amount of fire anticipated in a given area. Another criticism is that extinguishers are too often hidden from view in wall recesses and stairways and are frequently inaccessible.

A fire extinguisher is of no value if it cannot be found or reached. Don't expect your people to remember where they are because they won't. You've got to place the units in such a manner that they

can be seen down a corridor easily. Extinguishers should never be located at the extreme end of a corridor but half-way between two given points.

(b) Standpipe and hose are absolutely essential in all hospitals as they provide an unlimited supply of water. A standard water-type of extinguisher contains only two and a half gallons of water. There are many locations and areas in a hospital where, because of the heavy fire-load, portable extinguishers would be valueless under certain conditions. Without standpipe protection with which to cool down the fire rapidly, a serious problem would be created, as smoke and gases would spread rapidly throughout the building. And don't say, as I have so often heard, "When fire reaches the stage where hose has to be used, it is a job for the fire department". That is defeatism and clearly indicates that the fact fire in a hospital is serious has not been realized. When fire occurs in a hospital, *we do not wait for the fire department or anyone else*. The fire must be attacked and stopped immediately, otherwise evacuation proceedings will have to begin. The fire department should be called to all fires as a precautionary measure but trained personnel can do a lot to control a fire until the firemen arrive. This means standpipe and hose protection.

(c) Fire alarm. If you do not have a fire alarm system in your hospital accessible to all areas and sounding in all areas, I would recommend that you have one installed, for how else can assistance be summoned rapidly when fire strikes. The ordinary telephone is too slow because it only reaches individuals. When the hospital fire squad is dispersed throughout the building, it would be useless to attempt to reach them all by phone.

On the other hand, a fire alarm system reaches all personnel simultaneously and, through coded signals, pinpoints the location of the blaze. Modern fire alarm systems are not noisy and do not disturb the patients. An alarm system is also essential for summoning large-scale assistance should evacuation or even partial evacuation become necessary. The ordinary telephone could never do this.

Smoke Protection

There was a time when, before the advent of fireproof or fire resistant construction, smoke barrier doors on corridors, and smoke-proof towers to replace the old fashioned outside metal fire escape, fire

in hospital meant evacuation of the patients. I remember when all available ambulances in the city would respond to fires in hospitals in anticipation of evacuation and transfer of patients to other hospitals.

Today solid masonry sees to it that the building does not burn down; masonry-enclosed stairways with fire doors at each level see to it that fire, smoke and hot gasses do not travel vertically to spread on upper floors; and metal swinging doors with wire glass panels, located in corridors see to it that fire, smoke and hot gases do not spread horizontally to engulf the entire floor or a corresponding wing.

In this way, the interior of a building is broken up into separate cubes so that when fire occurs anywhere in the building it may be confined to its room of origin or at worst its cube of origin.

A further advantage is that total evacuation of the building is no longer necessary; that is, if the doors in question remain closed. Patients in the immediate fire area need simply be transferred through the smoke barrier doors to the opposite wing where they will be comparatively safe for some time while fire fighting operations go on.

Of course, if corridor and stairway doors are wedged open, which is so often the case, or are lacking entirely, then obviously evacuation of patients to the outside is likely.

Part of your fire safety program should be to see that corridor smoke barrier doors be closed at all times when they are not in use. The same rule should apply to stairways as these are literally interior fire escapes. You may not have such built-in protection, or some doors may have been removed or do not work properly. It is extremely important that this matter be examined, and if such protection is lacking, correct the weakness as soon as you possibly can. It is just as important as fire equipment, if not more so.

Every hospital staff member is a potential fire fighter and should be trained as such the day he enters the employ of the hospital. The same thing applies to nurses and interns for, they too, may discover a fire, and must know what to do. Employees must be trained in fire procedures, and the training must continue with regular fire drills weekly, a different location to be "attacked" each time a fire exercise is held. As only a small group of people, possibly five or six at the most, are affected in these fire ex-

(Concluded on page 80)



17th Annual Meeting of the Maritime Hospital Association

Session by the Sea

W. D. Piercey, M.D.

FROM June 3 to 5 the Algonquin Hotel, St. Andrews, N.B., was filled with Maritime hospital people, participating in the 17th annual meeting of the Maritime Hospital Association. Meeting concurrently were the Maritime Hospital Auxiliaries Association and the Maritime Hospital Exhibitors Association. The largest registration ever for the association was recorded, and the program was one of the best in the association's history.

Following an executive meeting held on Tuesday evening, the address of welcome and the official opening of the exhibits, given by A. J. MacDonald, president of the M.H.A., got the session off to a good start Wednesday morning. During a business session reports were presented by Gladys Porter, secretary-treasurer of the association, and by the M.H.A. delegates to the C.H.A.'s 15th biennial meeting. The rest of the first day was given over to sectional sessions; the N.B. section met under the chairmanship of Chaiker Abbis of Edmundston; N.S. section under Michael MacDonald of Sydney; P.E.I. section under Col. Leo F. MacDonald of Charlottetown. Newfoundland delegates met with Nova Scotia's—Lt. Col. Hannah Janes of the Salvation Army Grace Hospital in St. John's, acted as chairman for Newfoundland. In between sessions ample time was found to visit the well displayed exhibits of hospital equipment and goods.

In the secretary-treasurer's report Mrs. Porter noted that the past year had been an exceedingly busy one for member hospitals. Administrators and staff were concerned either with the introduction of the provincial hospital insurance plan (as Nova Scotia was) or with getting ready for the plan (July 1 is the date set for the plan's inception in New Brunswick, and October 1 is the important date in Prince Edward Island). The best co-operation, Mrs. Porter stated, exists between the M.H.A. and the several departments of health or commissions. Several members of the executive of the association are members of these commissions. Mother M. Ignatius had found it necessary, because of ill health, to resign as a member of the Nova Scotia Hospital Insurance Commission, and Sister Catherine Gerard has been appointed.

During the past year a number of Red Cross Hospitals, now under the direction of community groups in Nova Scotia, have become members of the association. Several new hospitals in New Brunswick have been welcomed in also. Charles Gerald Bird has joined the New Brunswick section as full-time executive secretary. Mrs. Porter expressed the association's appreciation to Walter Dick for organizing the M.H.A. Institute during the fall of 1958. Thanks was also expressed to A. J. MacDonald for filling the unexpired term of Dr. MacKay as president so capably.

On Thursday morning Helen Mussallem, director of the Canadian Nurses' Association's Pilot Project for Evaluation of Schools of Nursing, gave an interesting review of the project to date. Of some 80 schools of nursing which volunteered to participate in the pilot study, 25 had been selected according to geographic location, size, and whether French or English speaking, for survey. Miss Mussallem is now writing the report of the project which is to be studied by various committees of the Canadian Nurses' Association, and a full report on the survey and evaluation will be made to the C.N.A.'s biennial meeting in 1960.

Focus on Accreditation

During the course of his address, "Accreditation of a Small Hospital", Dr. W. I. Taylor, executive director of the Canadian Council on Hospital Accreditation, stated that the Maritimes have the best record of achievement in accreditation. In the four Atlantic provinces, 58 per cent of the eligible hospitals are accredited or provisionally accredited. This compares very favourably indeed with the percentage—43—for Canada as a whole. He went on to say that the rate of accreditation in the Maritimes, which has so many small hospitals, proves his thesis that accreditation is applicable to small hospitals. In Nova Scotia, for example, 27 per cent of the hospitals having less than 50 beds are accredited. In New Brunswick, 20 per cent of the

hospitals under 50 beds are accredited. The percentage of hospitals under 50 beds accredited in Canada as a whole is seven per cent—a poor record for the smaller hospitals, which indicates that they are not benefitting enough from the accreditation program. If the larger hospitals are better hospitals, as a lot of people seem to think, are they better because they are bigger, or because more of them participate in the accreditation program? There is food for thought here, Dr. Taylor challenged.

Dr. Taylor went on to say that the Council, concerned about the smaller hospitals, is making a special effort to bring them into the program. He mentioned the Council's *Accreditation of a Hospital with a Small Medical Staff*, an informative and useful guide which the Council has made available. There is no excuse for different standards of care—no matter what the hospital size. To support this statement, Dr. Taylor quoted from the above mentioned guide:

"The *Standards for Accreditation of Canadian Hospitals* may have seemed to you a formidable document, demanding a pattern of organization and requiring facilities and personnel beyond your resources. This is not so. You need not be frustrated by the apparent formalism and rigidity of the requirements. The standards are applicable to hospitals of all sizes. Ability to meet accreditation requirements is neither restricted nor enhanced by the physical dimensions of the hospital or the numerical strength of its medical staff. If your hospital has at least 25 beds and at least three active staff members, it should be able to meet accreditation requirements.

"Hospitals are established to give good medical care to hospital patients. Every hospital governing body, every

hospital administrator and every hospital medical staff member has a responsibility to the patient and to the public to provide the best patient care that medical science can provide in the hospital. This can be achieved if there is a safe physical plant, sufficient diagnostic and treatment facilities, adequate auxiliary hospital staff and effective co-operation among the governing board, the administrator, and the medical staff."

(Dr. Taylor's address will be published in full in a future issue of *Canadian Hospital*.)

Volunteer Service

C. V. Charters, a commissioner of the Ontario Hospital Services Commission, followed Dr. Taylor with a paper on hospital administration. Mr. Charters is a past-president of the Ontario Hospital Association and a trustee and former chairman of the Peel Memorial Hospital, Brampton. In talking on "Change and Challenge" he stressed the value and importance of volunteer service to public general hospitals. Local responsibility has changed since the advent of government hospital insurance, but contrary to the belief of many people, the change has not been one of lessening, but one of increasing responsibility—increasing to such an extent that the preservation of local hospital autonomy hangs in the balance. The increased responsibility must be met. This should answer in part at least the question "What is left for us to do?" It should also dispel any doubts about the continuing need for strong voluntary effort by trustee groups, advisory boards and women's auxiliaries.

Hospitals can no longer afford to consider themselves entirely separate entities in the huge, overall health picture, Mr. Charters re-

minded. Our entire hospital system must be integrated, not only within a specific community but within an entire province. Today there is hardly a hospital which isn't filled to capacity with patients or that hasn't large waiting lists—boards must seriously consider this problem, he went on "Is the addition of more active treatment beds the solution, or could it be that your hospital and the hospital on the next block, and indeed in the next town, have active treatment beds occupied by patients who should, by the very nature of their illness, be confined to a chronic wing or a chronic hospital?" How many active treatment beds could be made available by the removal of these patients to the right locale? Are still other active treatment beds being used by patients who should be in convalescent homes? Can our admissions be reduced by an expansion of the community's out-patient facilities? These were the questions posed by the speaker to emphasize his point.

How are facilities to be financed? Not by the government, he reminded, but by the individual community if local ownership and control is to continue. It is important to realize that a number of our citizens have some misconceptions which should be cleared up by the local boards. Hospitals cannot afford to let their public relations lapse—for public relations is what part of the board's job is. Our citizens have a substantial stake in our hospitals, and so they have every right to expect that all the facts about our hospitals and their needs will be given to them, he said. It is the responsibility of the hospitals' governing bodies to do this. They must stress

(Continued on page 82)



L. to r.: Dr. D. F. W. Porter, Bathurst, N.B., immediate past president of the C.H.A.; Neil D. Maclean, Charlottetown, P.E.I., chairman of the P.E.I. section; A. J. MacDonald, Glace Bay, N.S., immediate past president of the Maritime Hospital Association; Gladys M. Porter, Kentville, N.S., secretary-treasurer of the M.H.A.; Col. L. F. MacDonald, Charlottetown, P.E.I., president of the M.H.A.; D. J. Gillis, Glace Bay, N.S.; and Chaiker Abbas, Edmundston, N.B., chairman of the N.B. section.

Pipeline to the Patient

George McCracken,
Toronto, Ont.

HOW has therapeutic oxygen been delivered from the factory to the patient? Up 'till now, it's been done in three ways. (The purchase of oxygen in small containers is too expensive to be justified except for anaesthesia.)

First, large cylinders of oxygen may be purchased and transported throughout the hospital as the need arises. The pressure may be reduced by a combination pressure regulator and flowmeter, as the gas is delivered to the patient. Unfortunately, this system is expensive, inefficient and dangerous.

A second way is by having a number of large cylinders of oxygen attached to a manifold

with one pressure regulator and an outlet valve set to deliver oxygen at a low pressure. This is then distributed throughout the hospital by means of an internal network of oxygen lines and delivered to an outlet in the wall near the patient's bed.

And third, oxygen may be delivered in its liquid state in insulated tank trucks and pumped from these trucks into a large container located near the hospital. This is known as a "cold evaporator system". From this "system" the oxygen is piped to the patient under low pressure from the manifold setup described above.

Either of the last two methods of transporting and storing oxygen are to be preferred to the first one because they do away with the necessity of transporting cylinders, and are much cheaper. However, we at the Hamilton General felt that there was still room for improvement.

If an internal pipeline was cheap and efficient, connecting it to an external pipeline direct to the supplying company should make it still cheaper and even more efficient. Accordingly, on January 19 of this year a valve was turned which made Hamilton General Hospitals, according to our suppliers, the first hospital in Canada to provide patients with

oxygen direct from the producing factory. In doing this we were assisted by two factors:—we are close to the supplying company (approximately a mile and a quarter); and we were able to make use of an existing natural roadbed, along a railway right of way, for almost all the length of the pipeline.

Thus the pipeline was possible, and since the pipeline is the simplest, most direct method of supplying oxygen, the cost to the hospital is less than by other means. It also does away with the necessity of having a large accumulator bank of oxygen tanks or container on hospital grounds, using space which will be needed for hospital expansion. And, of course, it means that the oxygen bank no longer needs to be re-filled — a procedure causing a shrill whining noise which occasionally bothered our patients.

Since the pipeline was installed at the expense of the supplying company, this did not constitute an expense to the hospital. And last, but not least, it assures the hospital of a continuous fully-automatic supply of oxygen.

Since the pipeline stretches a distance of one and one-quarter miles, there is always the possibility of something happening to interrupt the flow of oxygen. To guard against this possibility and to protect our patients, it was necessary to establish a small emergency supply of oxygen within the hospital. In the event of a fall in oxygen pressure from the outside pipeline, this emergency system automatically cuts in and will supply oxygen for a period of 24 hours. In addition, any loss of pressure in the main line or in the emergency bank automatically starts a signal showing what has happened and warning us that the emergency supply is being used. As soon as this happens the company is notified and steps are taken to repair the damage and to provide an emergency supply direct from a tank truck or from portable cylinders.

While efficiency is important in a hospital, it must not be gained at the expense of patient care. We feel that our new pipeline has contributed both to increased efficiency and to improved patient care. ■

Mr. McCracken was administrative resident with the Hamilton General Hospitals when he wrote this article. He is now assistant director of the Canadian Hospital Association.



W. B. Gay, chairman of the board of governors of the Hamilton General Hospitals turns the valve to open the new pipeline. Watching, (l. to r.) are Jack Marta of the Canadian Liquid Air; H. P. Christie, maintenance supervisor; A. M. Keebler, business administrator; and Dr. H. E. Appleyard, director of hospitals.

—Photo courtesy of the Hamilton Spectator.

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"What remains for voluntary effort?"

WHAT a negative question! What a pessimistic approach! It sounds as if the introduction of a hospital insurance plan coincides with the coming of doomsday. Why this negative view? Why this counsel of despair? Surely the question is not "What is left for voluntary effort?", but rather, "What new responsibilities now devolve upon us?" What are the critical needs most demanding our attention? What problems, long neglected, cry out for voluntary attention? What projects remain undernourished for want of voluntary funds? What outmoded programs moan and groan for want of a transfusion of new voluntary initiative and imagination? What endeavours need to be led out of their confusion by voluntary talent for organization? What projects need to be terminated and what combined because their usefulness is declining or ended?

Obviously it is not a matter of folding our arms, but of rolling up our sleeves; not of sighing for the good old days, but of cheerfully facing up to the challenge of tomorrow; not of asking "What is left?", but "What is next?"

Let us be specific. Let us examine the impact of the hospital insurance program. What is the real significance of this national insurance program?

We can summarize by saying that there are four main effects:

1. One agency, instead of many agencies and many individuals, is paying most of the hospital bills for standard ward care.

2. For the first time for most hospitals, revenues approximate the actual operating costs of providing care. In other words, the effect is a virtual elimination of operating deficits.

3. An external budgetary review. The method of paying hospitals requires submission of a budget,

The author is associate professor of political science, University of Toronto. He gave this address to the first annual conference of the Quebec Hospital Association, in Montreal, March 1959.

Malcolm G. Taylor, M.A., Ph.D.,
Toronto, Ont.

but good hospitals have always prepared budgets and from the point of view of good management all the others should have been doing so. Now I would not minimize the importance of this external review of a hospital's operations, but if we assume—and I am sure we can—that both the hospitals and the hospital services commissions have the same objectives in view—improving standards of care—then external review is more likely to be a good thing than a bad thing.

4. As a result of the extension of the insurance mechanism to all the people, hospitals experience an increasing flow of patients. You can rightfully interpret this as a strong public endorsement of your product.

These are the four important effects. But there is one other point that requires emphasis. It is one effect that has not materialized. There has not been, in any province, the slightest suggestion that hospitals should, as the expression goes, be "taken over" by government. On the contrary, there seems to be universal agreement in Canada—certainly it is my own view—that services that affect individuals as intimately as do

hospital services, are best provided by voluntary or locally owned institutions.

In the light of these considerations, then, one must ask "What changes have reduced the dependence on voluntary effort?" The only one of any possible importance must be the removal of an operating deficit. But surely, no one could mourn its passing. Nowhere have I heard a funeral dirge.

But it may be that many regret the passing of the opportunity for voluntary effort in helping hospitals to finance their operations. It would seem to me, in assessing this view, that we would have to weigh the loss of voluntary action to make up deficits—important as those individual acts of generosity and sacrifice have been—against the great gain in human dignity through the vast reduction in the number of people who must ask for charity. And in weighing these two social "goods" we must not forget that the blessings flowing to those who give do not flow in equal measure to those who receive. Moreover, there are many alternative uses for those voluntary funds.

Now, what of the other aspects of hospital enterprise, that have evoked such magnificent and selfless devotion across this country? Have they diminished? No, I would say, (and I am sure you concur) of course they have not.

First there is the need for physical facilities. With the necessity in most provinces of expanding hospital resources to overcome existing shortages as well as to prepare for needs in a growing population, there will be little or no decline in the need for community contributions. Moreover, if we believe what we say about voluntary action, about the importance of local ownership and control, we will insist on a large share of financing at the local level. There is general lack of appreciation of this point. No one should have the impression that the national hospital plan provides the hospital plant. The need for voluntary fund raising for capital purposes of

(concluded on page 60)



Malcolm G. Taylor



Patient receiving injection of contrast medium in preparation for nephrotomographic examination.

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Voluntary Effort
(Concluded from page 58)

course still continues unabated.

Second, there will be a greater demand in what we may call "trustee activity". Deficit financing will be less of a problem, but over-all management responsibilities will inevitably expand as we concentrate on raising standards, introducing new services, developing personnel, and integrating more closely each hospital's services with those of others.

Third, one can see no decline in the need for the illustrious and dedicated contributions of the volunteers in the women's auxiliaries. The financial incentive remains the same, and in many instances will be improved. It remains the same for many activities because costs of care are rising. It is still the community that is paying the costs, and volunteer efforts can help to keep those costs from rising. In many other areas of service, it may well be that incentives will be enhanced for it will be easier to interest volunteer effort in positive contributions to the hospital—such as new equipment—than in the negative goals of making up a deficit.

A *fourth* aspect of hospital operations requiring greater voluntary effort than before is the task of developing better hospital public relations in the broad sense of that term. With everyone contributing in some way to hospital financing, hospitals automatically become of interest to a wider public. It will be both a more interested and a more inquiring public. There will be need for broad programs of education and information so that the hospitals and the hospital insurance program are understood by all.

But even these are not the end. For in addition to sharpening up, broadening, enhancing, and spreading present responsibilities, there will be other new and stimulating challenges. We are all aware of new developments that must engage our attention.

Five. Expanding out-patient departments and diagnostic services at all base and direct hospitals and many community hospitals have a high priority.

Six. The establishment of rehabilitation centres is in many cases organized and supported by voluntary associations. An enormous part of the task of rehabilitation requires personal services that can well be provided by generous, kindly, interested vol-

unteers. The availability of money to pay for the basic operating costs of such centres should act as a spur to voluntary effort everywhere to hasten the provision of services to bring new light and hope to blighted lives.

Seven. The establishment of chronic and convalescent care facilities and services provides a challenge of equal worth and merit. All of us know how far short we fall in meeting these needs, in making available to those who can benefit the full range of services and care we know how to provide. The challenge here is overwhelming. The increase in the number of aged alone makes immediate action imperative.

Eight. Along the same line, the development of home care services is an absolute necessity. It seems to me that there are organizational problems here that voluntary effort is best qualified to work out. To fail to develop such services is short-sighted and extravagant.

There are many others, better known to you than to me, but it is obvious that there is no lack of things to do. Furthermore, what is even more clear, these are tasks to be undertaken by medical, hospital and other community leaders. They are programs whose complexity matches their importance. They require the kind of informed community leadership that you have long given and that you are, by the testimony of the great institutions with which you are associated, best qualified to give.

There is one more specific area in which your leadership is most essential. The development of these programs through government makes more imperative than ever before the development of strong, well-organized, enlightened, united voluntary associations. Government needs, the hospitals require, public interest dictates the presence of such organizations with a dedication to the public interest and to high standards, serving as channels of communication between government and hospitals, to advise government, to assist government, to act as a responsible voice of hospital interests. This requires voluntary action and statesmanlike qualities of a high order.

From this brief review, we see, therefore, that a hospital insurance plan in no way reduces the challenge to or the need for voluntary action. Rather, it acts as a stimulus and a catalyst.

Clearly, what has happened is

this. Hospital leadership, medical leadership, Blue Cross leadership exposed a great area of need and developed the techniques of prepayment to deal with it. The results were so excellent that the public said, in effect, "Prepayment is so good that all must have it available." At this point, public opinion is acted upon by political parties and a universal program is adopted.

In the meantime, what has been happening? Private initiative, voluntary effort, have revealed new areas of need and are experimenting with new solutions. The assumption of basic operating costs of a universal hospital plan has the effect, then, of freeing, releasing, making available voluntary talents, funds, initiative, organizing ability, to explore the frontiers of human requirements, to shine the light of experimentation into the recesses of human want and needs, to develop new methods and solutions, to establish the standards of performance.

It seems to me that this is the key to the phenomenal progress of our free society. It is a dynamic society. It is a fallacy to think that there is only so much to be done, and if government assumes part of the burden, the remainder for voluntary effort is thereby reduced. What a static view of modern needs and standards! On the contrary, this process is the essence of dynamic democracy. Voluntary leadership, voluntary action are the wellsprings of inspiration from which eventually flows the greatest good to the greatest number.

One has only to look at the hospitals with which you are associated. As I look at them, as the public looks at them, they present one view—monuments to community and voluntary action, citadels of warfare on human disease and misery, symbols of public concern and dedication, tributes to single and group leadership.

As you look at them, however, you see all this, but you undoubtedly see much more. You see tasks still undone—the facilities to be expanded and replaced, the new equipment to be installed, the standards to be raised, the programs to be adopted, the related services to be developed. Your feeling is undoubtedly, "Wonderful though it may be, there is still so much to do."

And I, knowing you as I do, can say with confidence, "Great though your performance has been, the best is yet to be!" ■

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Are You Planning Your Hospital Kitchen?

THE rapid increase in the number of hospitals within recent years has been accompanied by an increase of building costs which emphasizes the need for careful attention in planning. The hospital dietary department merits exact and accurate planning since the food service equipment has been estimated by certain architects¹ to require approximately 12 to 15 per cent of the equipment fund for the entire hospital. The sum of money invested and the length of time that this equipment will be in operation both justify the need for adequate information in planning, equipping and establishing a dietary department.

Excellent food, which meets the nutritional needs of both hospital patients and personnel, and which combines good flavour with eye appeal may be obtained with a minimum of effort and without confusion and waste if the equipment has been selected carefully and arranged to meet the needs of the menu. The equipment should respond to the exigency of the menu; the menu should not be adjusted to the equipment.

Such considerations lead to some inquiry on how the hospital dietary departments of the Province of Quebec handle this problem of planning and equipping the main kitchen.

The purpose of this study was to investigate the amount, type and use of kitchen equipment in a selected group of hospitals of the Province of Quebec; to relate this information to the menu; and to develop, if possible, recommendations for increasing the efficiency of hospital kitchen planning.

This initial study has been limited to the fixed equipment of the cooking area in the main kitchen. Three different approaches were used to collect the data.

Mrs. Rousseau is with the Quebec Immigration Hospital in Quebec City.

Raymonde Potvin-Rousseau,
B.Sc. Dom., P.Dt., M.Sc.
Quebec, Que.

A questionnaire was sent to 102 hospitals, and 81 returns were received. Responses were tabulated according to the type of hospitals and the bed capacity.

The questionnaires returned revealed that the fry top range sections, the below range ovens, the 30-, 40-, and 60-gallon stationary steam-jacketed kettles, and the 60-pound floor type of deep fat fryers were the type of equipment found most frequently in any size or type of hospital. The three-compartment steam cooker and the broiler were found in approximately half of the hospitals. Only 11 out of 81 kitchens had a trunnion type of steam-jacketed kettle. Electricity and gas were the fuels generally used for ranges, ovens and broilers. Fifty-nine hospitals reported that their equipment was adequate and 19, inadequate.

As a second step, the observation was employed to study the use of this equipment by adapting Dana's¹ and Thomas² method to the present research. A timing technique was developed to record on charts the number, type and size or capacity of each piece of equipment used and the time of day when all food items on the menu were prepared. The quantity prepared and the number of servings were also noted.

Ten general hospitals representing different districts of the

province were chosen for the observation. The results of this observation showed that the amount and type of equipment used were not necessarily those best suited to the production of the menu items. It was noticeable that half of the hospitals needed some other pieces of equipment. The menu was planned around the equipment, and, in many instances, this fact was responsible for the non-selective menu served to patients and personnel.

The observation indicated also that the food was cooked early before the serving time and, sometimes held in the equipment. The scheduling of the employees, the scheduling of the work, and the time of the service period appeared to be responsible for this early cooking. However, in one large hospital a time sheet schedule gave the time for the departure of each heated cart from the kitchen to the floor. Relatively little small-batch cookery was used and no food was placed in the cart before the time indicated.

The findings obtained by this observation technique were made more meaningful by the analysis of all individual factors influencing the food service of each hospital. Therefore, two case studies were discussed and constituted the third approach to the problem.

Two representative hospitals were chosen from the ten visited. Information about the menu, recorded during each observation day, was summarized in chart form. A production analysis chart of the menu was made by applying Dana's¹ method, and was summarized on additional charts. Consideration was given to: number of portions, size of portions, total quantity, number of batches, number and size of pans, cooking time, (minutes required, and time of the day) kind of equipment necessary, and size of equipment.

The results of the case studies
(Concluded on page 68)

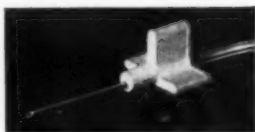
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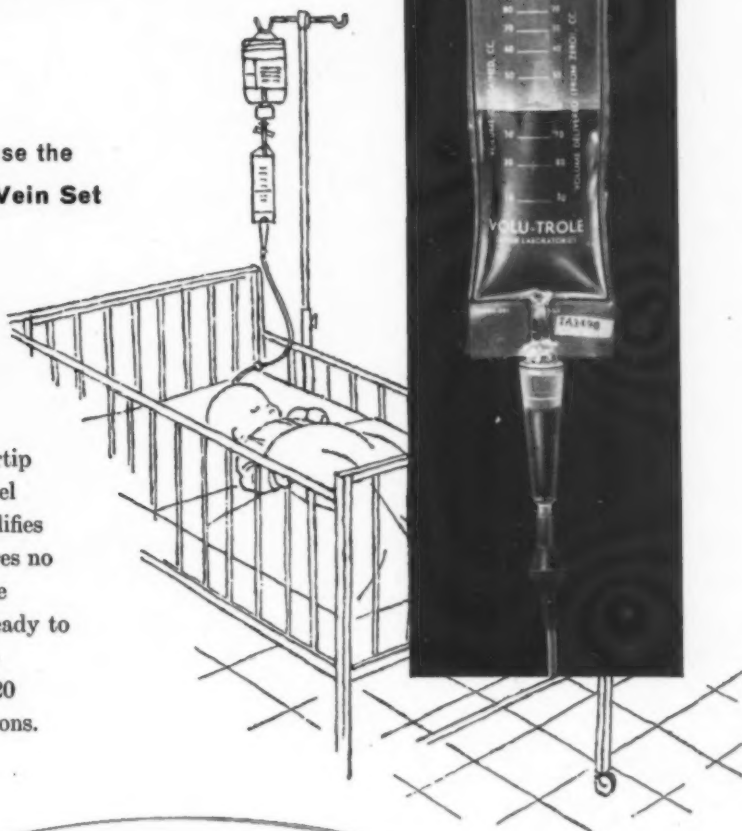
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Provincial Notes

Newfoundland

A \$900,000 maternity and paediatrics wing to be added to St. Clare's Mercy Hospital in St. John's will have 100 beds—60 for maternity cases and 40 for children. The new wing, which will release the second floor of the hospital for the care of surgical and medical cases, will be connected to the original building by an underground tunnel as well as by an overhead bridge on the second floor level. The addition will have a basement and six floors. On one floor will be a new kitchen to serve the entire hospital. Architects are Durnford, Bolton, Chadwick and Ellwood of Montreal, Que.

Nova Scotia

Tenders have been called for a \$5,000,000 expansion to the Halifax Infirmary in Halifax. Before work on the new 338-bed hospital wing can get under way, new laundry facilities and an enlarged power and heating plant must be completed. Residence facilities will also be expanded to accommodate almost 60 Sisters of Charity on the staff.

The site has been chosen for a new community hospital in New Waterford. Architects are Keith Graham and Associates, Halifax. A colourful signboard, in the centre of the site, depicts the new hospital and describes its services.

Quebec

A campaign for \$1,900,000, to help finance the Queen Elizabeth Hospital of Montreal's current building program, will be conducted in the Montreal area this September. The hospital's new building is to be ready for occupancy in February 1960. A new nurses' home will be completed by the end of October.

L'Hôpital Général St-Vincent-de-Paul in Sherbrooke is to have a new nursing school and residence. Designed by Audet, Tremblay and Audet of Sherbrooke, the seven-storey building will house 160 students, 150 of them in private rooms. Included, too, will be an assembly room, large enough to accommodate 400 persons.

The Quebec Institute of Cardiology was officially inaugurated recently at Laval Hospital in Quebec City. The new institute is located in a wing of the hospital, a wing which used to house tuberculosis patients. It has been completely renovated and given the most modern equipment available. In addition to caring for people with heart ailments, the institute will promote surgical and medical sciences in the cardio-pulmonary field, do research on heart ailments, educate the population in the prevention and treatment of heart diseases, and help with the rehabilitation of heart sufferers.

A new chapel, large enough to seat 350 persons, is to be built at l'Hôpital St-Joseph in Rimouski. The chapel will cost an estimated \$75,000. The architect is Albert Leclerc of Rimouski.

A large addition to the Montreal General Hospital in Montreal is under construction. Two floors are being added to one wing, three floors to another. The enlargement will mean the expansion of the clinical investigation facilities. Plans are by Fleming and Smith, Montreal.

The new wing at l'Hôtel-Dieu St-Vallier in Chicoutimi has been officially opened. The wing houses a nursing school, rehabilitation centre and maternity and isolation departments.

The Royal Victoria Hospital in Montreal has a new machine—a heart helper or blood pressure booster. The machine will be used on patients who have suffered severe heart attacks and whose blood pressure cannot be maintained by other methods.

A new building is to be erected for the Montreal Institute of Cardiology which is now located in Hôpital Maisonneuve in Montreal. The new building will have about 100 beds and will be used for the treatment of heart patients and, most important, for research.

The Reddy Memorial Hospital in Montreal will receive \$35,000 yearly from the estate of the late Percy R. Walters. The money will be known as the Percy R. Walters Memorial Fund.

This year l'Hôtel-Dieu d'Arthabaska in Arthabaska celebrates its 75th anniversary. It is also plann-

ing a large expansion program that will increase its beds from 185 to 350. Architect David Deshaies of Nicolet is now preparing plans for a new wing.

Ontario

The possibility of establishing a hospital to serve parts of Elgin, Middlesex, Lambton and Kent was considered at a meeting in Wardsville in March. A committee has been appointed to visit Toronto and obtain information about the cost of such a project.

Although the Alexandra Marine and General Hospital in Goderich has a new wing which has been operating for just one year, the space problem is acute once more. It appears now that the old building must either be renovated or replaced entirely.

Construction of a new wing at the Parry Sound General Hospital has been halted temporarily because foundations on the northeast wall of the addition are not strong enough. And the original estimates of cost were not accurate; the new wing will cost \$900,000 or \$1,000,000, not \$750,000 as it was thought at first.

The St. Clair Hospital Association, which is made up of about 25 Toronto businessmen of Italian background, is spearheading a \$1,500,000 drive for its proposed 125-bed hospital to be built in North York. Plans are being drawn up by Venchiarutti and Venchiarutti, and Dr. F. G. Faludi of Toronto.

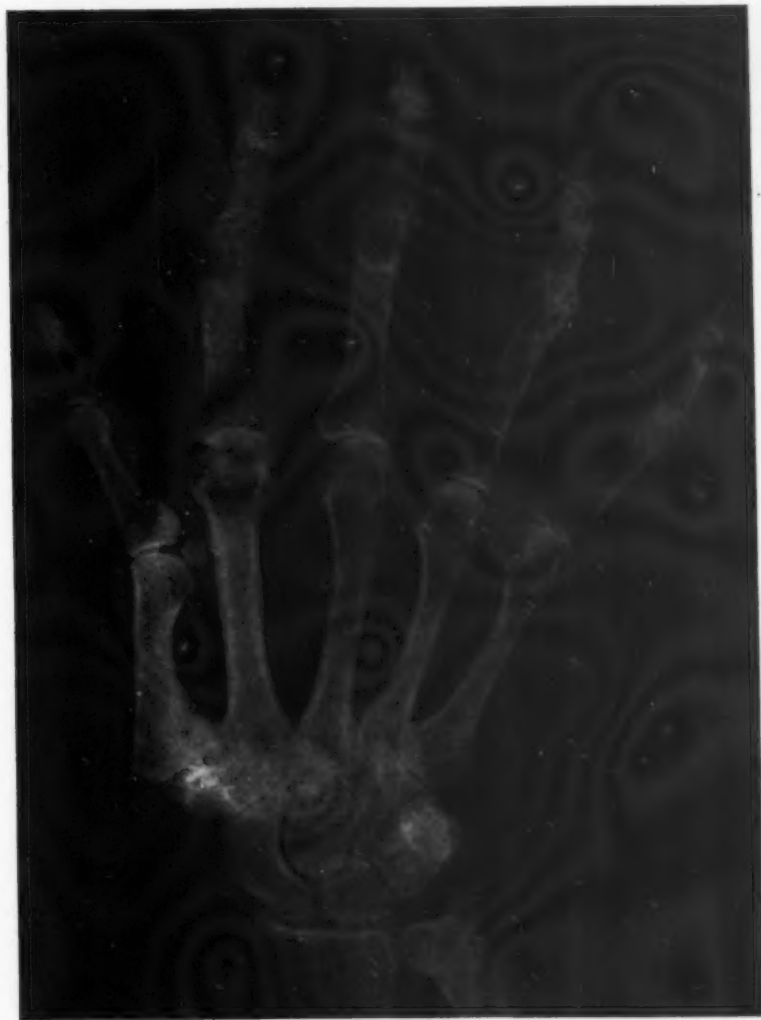
Architects John B. Parkin and Associates, Don Mills, are preparing sketches for a proposed 125-135 bed addition to the Northwestern General Hospital in Toronto.

A clinic will be added to the Ontario Hospital in North Bay. Operating rooms will be located on the top floor of the structure. When the new clinic is finished, surgical patients will be treated there and will not have to be sent to Toronto.

Plans for the construction of a 100-bed addition to Peel County Manor, a home for the aged in Brampton, have been approved. The new wing, designed for bed care patients, will cost an estimated \$550,000. The building will have two storeys and a basement.

Construction of a new three-storey addition to the County of Bruce General Hospital in Walkerton is now well under way. Cost of the addition is estimated at \$134,750. The wing will include

(Concluded on page 68)



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With the Auxiliaries

National Council Meets

Delegates from every province attended the fifth biennial convention of the National Council of Hospital Auxiliaries of Canada, Inc., at the Queen Elizabeth Hotel, Montreal, from May 10 to 13. The meeting was held in conjunction with the fifteenth biennial meeting of the Canadian Hospital Association, of which the National Council is an associate member.

The program of the convention had been prepared to cover as many phases as possible of auxiliary activity—members were invited to submit, in advance, suggestions for topics which they felt to be of interest. At the opening session, a supper meeting, members were privileged to hear several of these topics discussed by Dr. W. Douglas Piercey, executive director of the Canadian Hospital Association.

During the evening, Mme Sylva Lamothe, president of the Province of Quebec Association of Hospital Auxiliaries, told of the early life of Jeanne Mance, that intrepid woman who came from France to found the first group of volunteers who would care for the sick in the New World.

Business sessions occupied the first full day of the convention when reports of the officers and chairmen of committees were received and programs and projects for the forthcoming year studied and agreed upon.

The report of the president, Mrs. J. Cecil McDougall, showed that the National Council's activities included: (a) an annual scholarship of \$375 to enable a graduate in social work to take post-graduate study in medical social service; (b) the augmenting by \$25 of any bursary of at least \$100 given by a provincial association to enable a high school graduate to train as a nurse, and (c) drugs worth \$200 sent to India for the relief of tuberculosis patients there.

Two news bulletins and the official magazine, *The Record*, appear annually, publicizing the work of volunteers who contribute so much in effort and money. The publications also make known trends, projects and programs in hospital

work. They both have a wide circulation within Canada and in countries with which the National Council has maintained contact.

A lending library and the circulation of pamphlets on a number of topics pertaining to auxiliary work are services maintained free of charge to auxiliaries. Both services help fill a much-felt need. So great has been the interest expressed by the many countries which have received our literature that we have been encouraged to inaugurate an International Alliance of Hospital Auxiliaries and have now received a charter from the Secretary of State for Canada.

The National Council, it was stated, now comprises approximately 90,000 members, organized in nearly 700 auxiliaries, which become members of their own provincial associations. These in turn form the National Council.

"Prescription for Progress" was the title of an address given by the guest speaker, R. S. White, director and sales manager of *The Gazette*, Montreal. Mr. White emphasized the part hospitals are playing in increasing the life span of the average citizen. He stressed the responsibility of the general public in supporting hospitals on an adequate basis. Here, stated Mr. White, auxiliaries could perform an important service by arranging panel discussions and similar events, the purpose of which would be to arouse interest and at the same time dispel any misconception on the true function of a hospital.

The rôle of the auxiliary member as an interpreter of the hospital to the community was also stressed by Helen Guiton, editor and executive director of the National Council, when she spoke on "The Place of the Volunteer in Provincial Hospital Plans". Auxiliary workers will still be needed as much as ever, but the rôle they will play under changed conditions should perhaps be re-assessed.

"Some Successful Money-Raising Ideas" was a topic presented by Mrs. Julius Block, auxiliary president, Jewish General Hospital, Montreal. She told of the ingenuity her members had displayed and the success which had crowned

their efforts. It was most important, Mrs. Block stressed, to impress on all helpers that the ultimate object in any scheme of this kind was the assistance it enabled them to offer to patients.

A panel discussion on the advantages of having a director of volunteers in a hospital aroused great interest and was a popular feature. Moderator and panelists were all directors of volunteers and they offered practical advice gained from their own experience. Those taking part, all of them from Montreal, were: F. McD. Baptist, Montreal General Hospital; Mrs. I. G. Ross, Royal Victoria Hospital; Mrs. H. Lynch-Staunton, St. Mary's Hospital, and Mme M. Laurendeau, who spoke in French, Hôpital Notre-Dame.

Mrs. Andrew Fleming, M.B.E., who is in charge of the gift shop at the Montreal General Hospital and Mrs. J. A. Woollven, who performs a similar service for the Montreal Children's Hospital, discussed the many aspects of their work under the title "Ideas on Gift Shops". The setting up of a shop, the selection of articles, methods of buying and pricing, necessary staff (voluntary and otherwise) and innumerable other details were presented in a masterly fashion. Delegates from near or from far, from large or from small hospitals, were given practical and helpful suggestions which might be adapted to any situation.

Equally valuable was the opportunity given to delegates to meet and exchange ideas and problems. Inspiration often comes from shared responsibilities and ideals.

For the officers elected see *Canadian Hospital*, June 1959, page 62.—Helen Guiton

What Will You Have?

Members of the auxiliary to the Cobourg District General Hospital in Cobourg, Ont., have made a very interesting discovery—patients prefer potato chips. Several months ago the ladies began operating a Mobile Server which carries magazines, hairnets, writing pads, envelopes, combs, candy, cigarettes and facial tissues through the wards. For the children there are such necessary items as colouring books, crayons, comic books, and small dolls. New mothers can choose tiny bonnets and sweaters from an attractive collection. Whatever the patient wants, the Mobile Server has. And what the patients want most is—you guessed it—potato chips.

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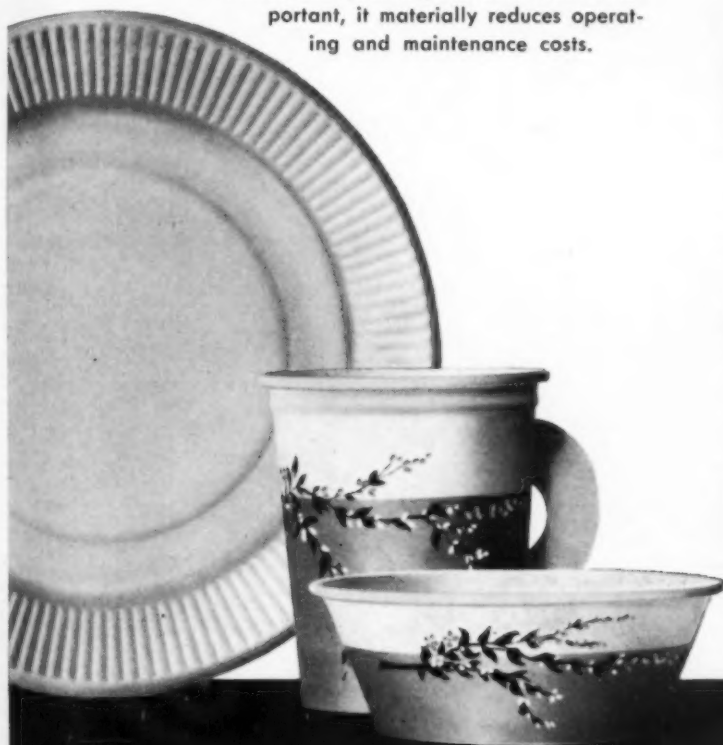
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JULY, 1959

(Concluded from page 64)
new x-ray facilities, operating room, maternity ward and an enlarged nursery.

Toronto Western Hospital in Toronto has called for tenders for its multi-million dollar expansion program. There will be two new patient care units, a ten-storey nurses' residence and a six-storey intern's residence. Architects are Govan, Ferguson, Lindsay, Kaminer, Langley, Keenleyside, Toronto.

Sarnia will have a mental health unit with up to 20 beds for in-patients and an out-patient clinic.

Manitoba

A new wing with space for 15-20 beds has been recommended for the Neepawa District Memorial Hospital in Neepawa. The wing could be used for convalescent and chronic cases, leaving the present space for the more critically ill.

Saskatchewan

The contract has been awarded for a new 25-bed hospital in Lac La Ronge, and it is expected that the hospital will be completed by November of this year. At present, a nursing station offers the only available facilities to Lac La Ronge. Patients must be flown to Prince Albert or Saskatoon. Architects for the new hospital, which will serve the Indian population too, are Kerr and Cullingworth of Saskatoon.

A three-storey addition is planned for St. Therese Hospital in Tisdale. Designed by Tinos Kortess of Saskatoon, the \$475,000 wing will contain administration offices, an obstetrical department and a paediatrics department.

The new nurses' residence at the Kamsack Union Hospital in Kamsack has been officially opened. It provides ten single rooms on each of its two floors. In each room there is a bed, chair, desk and book shelf, coffee table, reading lamp, closet and basin. On each floor there is a kitchenette and bathroom. A television room with adjoining snack bar and a sitting room are located on the second floor.

Alberta

The steady expansion of the Deerhome Hospital project in Red Deer is continuing. Three double dormitories are now in use. There are separate buildings to serve as warehouses, kitchen and bakery and service centres. Two more

dormitories are to be built this year and a third is to be completed next year. The entire project will cost about \$10,000,000 providing accommodation for about 1,200 mentally ill patients.

A 25-bed hospital is planned for the town of Leduc and its surrounding area.

Blais, Sheddon and Associates, Edmonton, are drawing the plans for a hospital for the chronically ill to be built in Grande Prairie. The one-storey building will provide 50 beds.

The ratepayers of the Rimbey Municipal Hospital District have approved the construction and equipping of a 15-bed addition to the Rimbey Municipal Hospital. Cost of the addition will be over \$100,000.

Work on the Hinton Municipal Hospital in Hinton is well under way. The hospital is to be completed by the end of September. The nurses' residence, well advanced now, will be the first building finished. Hospital equipment will be stored here as it is purchased. The hospital itself will be one-storey with a basement.

British Columbia

A new nurses' residence and school is planned for the Royal Columbian Hospital in New Westminster. At present, four nurses' homes are in use, three of which are considered fire hazards because of their frame construction.

The city of Nanaimo and residents of the South Central Vancouver Island Hospital Improvement District No. 20 approved two money bylaws authorizing the borrowing of funds to build a \$4,600,000 regional hospital. The hospital will be built so that five floors can be added when required.

A new 97-bed addition to the Chilliwack General Hospital in Chilliwack has been officially opened. The new addition, plus extensive alterations to the main building, means 110 more beds for the hospital. The total cost—including the cost of a 30-bed nurses' residence completed last year—was an estimated \$1,802,867. ■

Kitchen Planning

(Concluded from page 62)

confirmed the recommendations of other authors as well as the findings previously mentioned in the first part of the observation. The most important points observed were: the need for adequate and proper equipment in

amount and size; the need for small-batch cookery and, therefore, equipment of a suitable size; the need for careful scheduling of the work and for a shorter length of cooking time.

The results of the study served to emphasize the need for better hospital kitchen planning. The dietitian, who has the knowledge and the practical experience of food preparation requirements which contribute to the efficiency of operation, should be aware of her needs and know how to interpret them to architects, administrators, engineers, and equipment manufacturers.

Recommendations

These findings lead to the following recommendations:

1. When planning or remodelling a hospital kitchen:

First, consideration should be given to: (a) type of food service, (b) type of menu served, (c) length of the service period, and (d) number of persons to be fed at any one time.

Second, suggested lists of kitchen equipment according to bed capacity should be consulted as guides.

Third, analysis of four or five menus should be made before a final decision on the amount, type, and size of equipment to be purchased. (a) Equipment should be used to capacity, (b) small batch cookery should be used whenever possible during the service period, and (c) cooking time should be as close as possible to the serving time.

Fourth, help from competent advisers should be considered in selecting equipment.

2. This study revealed the need for research: Needed are (a) an analysis of nutritive value of food prepared early and held for service compared to food freshly cooked, and (b) a study of the roasting of meat and poultry in the rectangular roasting kettle used in a number of hospitals.

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3. Trimble, Guy H., and Mariam Kaufman, "What state consulting program can do to improve the planning of dietary facilities," *Modern Hospital*, Vol. LXXV (August, 1950) p. 112. ■

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Notice the Need
(Continued from page 34)

behaviour are less disruptive to harmonious and effective organization. And rightly so, for everybody's sake. But that still leaves the bulk of our job untouched. We learn much from negative feelings and attitudes, for they are indicators of the real needs that somehow are not being satisfied. Because they are not being satisfied, the essential human qualities are not being given a chance to develop.

If you ask me what those essentially human needs are, I can only give a halting formulation at the moment. It is my privilege to try to integrate myself into the progression that is culture through constant and continuous study of them. If I express my thoughts as they are at this moment, it is only for purposes of illustration, not finality. The question, "What are they?", is important to all of us. I urge you to be constantly raising it in your own minds as hospital administrators, and finding what answers you can in practice. You will find much that is of real, practical value, but the question will remain ever before you, worthy of further search.

With that apology, therefore, if you ask me in what terms do I express these essentially human needs, at the moment I will say this. Man, as he develops in society, in inter-personal living, and as he thereby contributes to the process of social evolution, is very sensitive in four ways.

From his earliest experience, in all his behaviour, he develops a sense of communion, a sense of identity, a sense of progression and a sense of social purpose. If any one of these is seriously lacking, they all are, or at least all the others are threatened.

Let me elaborate this statement just a little, for the sake of clarity. By sense of communion, I mean more than a dependent belongingness or passive feeling of security, or even being wanted. Communion is a mutually active experience among individuals, perhaps expressed best by some of the deeply significant words or phrases of our language, such as living together, family life, at home, hearth, foyer, Christmas eve, or other spiritual experiences.

By sense of identity I mean more than egocentricism, and something quite different from it. It is the answer to the important question

"Who am I?" in all its significances, values and aspirations. It is never "alone-ness" even in the privacy of one's own thoughts. It is not static, but always being in becoming, and through becoming. Erick Erickson perhaps more than any other modern psychological scholar has dignified this sense of identity. Without it, there can be no sense of we, of communion. It manifests itself to us from earliest experiences of self-initiated action—reaching, seeking, touching. As our acts add to, or destroy communion among us, we feel a sense of pleasure or sadness, enhancement or regret. It makes possible the development of character structure—a term, like kindness, that deserves a bolder place among technical psychological concepts.

By sense of progression I mean that which makes sense in change; the richness of memory as experience moves on, giving the past ever new, ever fuller understandings as life unfolds in a living development. We are always growing up, not down. Progression encompasses hope; if threatened, it encompasses fear and anxiety. It is self-determined, and hence embraces success, pride of success, and sometimes failure and guilt. It is *not* mere acquisition, or symbols of "better than" others, for it cannot be wholly positive and healthful if it in any shape or form depends upon the lesser significance of the other one.

All these come together at all times throughout lived experience in the sense of social purpose in what we are up to. Not mere plaudits of the crowd, or their envy, or their admiration, but rather the satisfaction of a precious and precise form of active partnership in the communion of man, a quality of doing things appropriate to the enhancement of man's culture. In Eric Fromm's dilemma-setting terms (in his book *The Sane Society*), not the consumer so much as the producer, not the conformer so much as the artistic re-formulator, not mutual alienation among us, but neighbourliness. Herein lies the quintessence of man's capabilities for love and for wisdom.

If in some such terms as these we re-view the challenge of our institutions and our part in their administration, we see that in creating and implementing their images, there are wonderfully heartening and exciting characteristics in things like families,

schools, industry and hospitals—just as much, and often more realistically, as there are in institutions of religion. Industry sets itself up to produce the idea of goods, as altruistically as a hospital sets itself up to heal. In work—even more than in leisure—the significance of the other ones is made a pattern of organization, wherein identity expresses itself in progressive communion. And it is the essence of all decently human institutions that change demands progress, not retrogression, and charity, in truth, gives place to love.

If we will look for these things, we shall find them. Or we may spend all our time being anxious about the breakdowns in living—the tensions between and among groups, the barriers to communion, the jealousies, the protests, the greeds, the starvations in sense of progression which greed implies, the confusions in sense of identity that are in all of us, and, probably most painful, or at least most ineffective, in mental illness. And day to day creakings crop up all the time. They have to be met with disciplined administration, without administering discipline, just as the doctor meets personal illness with a disciplined mind and determined fortitude. But we do not stop nearly enough to enquire into the situations surrounding us that portray that disciplined administration. And insofar as this is so, thus far are we failing to understand what man is really up to.

Increasingly I try to work with my student colleagues on not only the misfit or how to help him cease so to be, not only the intra and inter group tensions and anxieties, but especially on thoughtful enquiry about persons in organization where the basic senses are evident to observation, and felt in the persons themselves. It is my hope and belief that such enquiries, made under disciplined (not shoddy or mere sentimental) thinking, will enhance our understandings and enrich our administrative purposes.

And so, in summary and conclusion, I ask that we remind ourselves consistently of the need to notice that people like to be noticed—noticed as people. I ask that in administration there be a constant address, especially by those among us who have Woody Thompson's quality of "over-all-ness", to the basic questions of the nature of human nature and its potential for

(Concluded on page 79)



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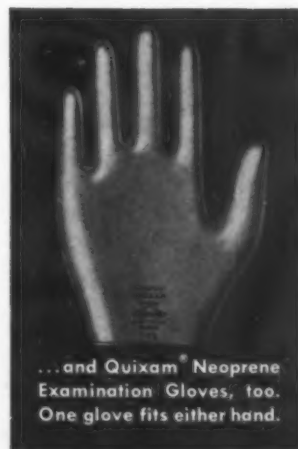
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Poison Control
(Concluded from page 51)

the Dominion asking help and guidance in setting up their newly instituted poison control centres. The acceptance and interest of this particular problem has been overwhelming. We have now approximately 35 poison control centres in operation in Canada; and the first one was established in April, 1957 in Toronto.

The poison control centre makes the information obtained through all our studies available to agencies and activities, both public and private. Many of the parent-teacher associations and service clubs are keenly interested in this information. Numerous talks have been given to these various agencies and I feel sure that they have been a considerable impetus in the preventative program in each household. I cannot emphasize too much or too often the tremendous value we place on the teaching of good preventative habits at home.

We attempt to carry on, therefore, an active, educative program, first of all to the staff of the participating hospitals, to the staff of the health department and to practising physicians by means of technical bulletins, pamphlets and through the local medical society bulletins. As you might imagine, in our hospital the interns receive considerable help each month in accident prevention when they have their tour of duty through the emergency department and are responsible for the poison control centre through the day. We instruct them in the various techniques we use and the various tests that are available.

The last but most important point, is the education of the public and the community. When the public realizes the high incidence of accidental poisoning which occurs in Canada and when the public is informed of the lethal properties of the common, every-day garden variety of household products, they usually co-operate.

In the past 18 months we have treated approximately 1,500 cases of poisoning. Accidental poisoning accounted for 10 per cent of the medical admissions to the emergency unit of our hospital. 59 per cent of our cases were due to the ingestion of internal medications or drugs, 33 per cent of the total cases were due to one single medication—acetylsalicylic acid. Fortunately overdosage prescribed by a physician or an individual other

than the victim, and mis-identification of a substance, i.e., camphorated oil for castor oil, accounted for less than four per cent. Therefore, drugs accounted for more than all other substances combined.

Household preparations of various kinds accounted for 13 per cent of the total, turpentine for two per cent and petroleum distillates for two per cent. During this period 181 children were admitted to hospital for 24 hours or more. Acetylsalicylic acid compounds accounted for 27 per cent of these admissions, drugs accounted for 50 per cent; household preparations for 22 per cent and petroleum distillates for another five per cent. Those admitted because of ingesting household preparations, i.e., furniture polish, floor cleaners, disinfectants, bleaches, detergents, had an average stay in hospital of approximately 7½ days. The longest stay in hospital was by a two and a half year old girl who drank ½ oz. of furniture polish. She remained in hospital for seven weeks, was acutely ill and many times at the beginning of the course it was doubtful she would recover.

Fifteen cases of ingestion of petroleum distillates accounted for an average stay in hospital of three days. It is interesting to note how few parents realize how lethal furniture polish is. The petroleum distillate it contains is extremely toxic and causes a considerable pulmonary edema and central nervous system depressant action, very quickly after its ingestion.

We have had one death during this period. This was due to the ingestion of headache tablets. A four-year old child fed his younger brother, a two-year old, three-quarters of a bottle of these adult tablets. There was considerable delay before the parents realized what had happened and in spite of heroic treatment the child did not survive.

At this point I might just mention two of the new methods which are used for acute salicylism. One is the artificial kidney and the other is a complete exchange transfusion of the blood. We have not used the artificial kidney in our hospital for ingestion of poisoning, but are seriously considering implementing this new therapeutic tool to rid the body of a particular ion. On one occasion it was necessary to use an exchange transfusion for salicylism in a young infant and the child's life was saved.

We have had two severe cases

of salicylism from methyl salicylate. I do not need to mention to pharmacists the extreme toxicity of this compound. I wish I could say the same for my confreres. In two out of three cases I read about recently in American literature, the physicians simply directed that water to drink be given to the child. They did not recommend intensive therapy. The children died. The children may not have lived, but this appalling lack of information is a black mark on the medical profession.

When they realize that 59 per cent of all our cases are due to drugs, physicians and pharmacists have a major responsibility in the control of accidental poisoning. I am far from being a therapeutic nihilist, and I recommend the use of every medication we have in our armamentarium to alleviate distress and fight disease. It is up to us to warn all our patients of the potential toxicity of each and every drug, to instruct them to keep all medications in a locked cupboard out of the reach of children. I understand that many of the hospital pharmacies in Toronto are slowly replacing the old, frail, easily accessible cardboard containers with newer plastic containers with tight fitting caps, which are more difficult for the one and two year olds to remove.

Recently I saw a number of safety closures for medications in the United States, where one or two companies are interested in this particular aspect of poison control, and in time they may come up with an excellent practical suggestion. It may not be the complete one, but each little suggestion helps.

I highly recommend the general use of the small stickers with the words "Keep out of the reach of children", As a general rule adults are co-operative when they are specifically cautioned. This method of labelling bottles and packages is simple, inexpensive and may be highly successful. Few adults realize that acetylsalicylic acid is lethal.

Remembering the efficacy of the recently developed polio vaccine for the control of this dread disease, remembering that 59 per cent of our poisoning cases were due to ingestion of drugs, you and I might inject some "safety vaccine" into the minds of all our patients and in so doing prevent them from death due to accidental chemical poisoning. ■

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JULY, 1959

75

Engineering
(Continued from page 48)

bery. This list can be broken down into many details and several thousand individual items.

A hospital may budget the various maintenance and replacement items by estimating their capital cost and the period of service expected. The estimated period of service of certain maintenance and replacement items are: roofing—20-25 years; heating (steam or hot water) — 30-35 years; painting and decorating — 3-5 years; floor surfaces—15 upward; plumbing — 25-30 years; screens, windows — 10-12 years; screen doors—3-5 years.

In the small hospital with fewer than 100 beds, the engineer is expected to supervise the boiler room and do the repair work. For such hospitals, the "mechanical" shop will look after plumbing, heating and electrical repair. In hospitals with 100 to 300 beds, a separate electrical shop will usually be justified.

A carpenter shop is a good investment for the 100-bed hospital although it may be used only for minor repairs and refinishing furniture. However, for larger hospitals such a shop is required for proper maintenance and is desirable for minor alterations and additions. A painter is vitally necessary. Modern medical science recognized that attractive surroundings have a therapeutic effect on the patient. Spray painting is quick and easy and a good paint sprayer will pay for itself. Proper protection of all types of wood, plaster and metal surfaces will go a long way toward reducing expensive repairs.

In most general hospitals of more than 300 beds, and in some special hospitals, a machine shop can justify its cost. In a general hospital, it can be used to repair equipment tools, and instruments. In an orthopaedic hospital, this shop is a necessity.

The maintenance of grounds will depend entirely on the location of the hospital and the extent to which the grounds are landscaped. Lawns, shrubs, and flowers require expert care and when the institution is not sufficiently large to warrant the employment of a trained man, it is a good policy to contract with a local gardener rather than leaving the grounds in the care of an inexperienced labourer.

Safeguards against moisture

should be provided at the time of construction and will save the hospital hundreds of dollars in time and material. If water seeps into a structure, recurring expense for repairs and maintenance of damaged interior surfaces may be expected. The moisture will not only damage plaster, wall decorations and contents, but, where continued over a long period of time, may cause structural damage through alternate freezing and thawing.

Floors, walls, and painted surfaces in the hospital are subject to hard use. No one floor surface will meet the requirements of every area in the hospital, but by examining materials such as troweled concrete, terrazzo, linoleum, asphalt tile, cork, quarry tile, and in some locations a bituminous surface, it will be possible to find a wearing surface to provide maximum service. Painted and decorated surfaces will meet hard wear, and materials should be chosen which will endure a great deal of cleaning. In areas of particularly hard use, such as kitchen, bathrooms, stairways, etc., tile or terra cotta units with a glazed finish should be used.

The engineering and maintenance department is under the supervision of a chief engineer. In the larger hospital, it has become the practice to centralize the functions of maintenance, engineering, housekeeping, and laundry under the direction of a single individual who may be a graduate engineer or a graduate in hospital administration. A position of this sort is comparable to that of assistant administrator with direct responsibility to the administrator. In general, however, there is a chief engineer who directs the engineering and maintenance and reports to the assistant administrator or to the administrator.

It is the chief engineer's responsibility to keep all systems in continual operation. His department is organized, therefore, to prevent breakdowns before they occur. This is known as preventive maintenance and is simply to combat wear and tear and to restore to a condition of original function or worth before ultimate failure or loss of a designed function occurs. This is achieved in three ways—by making a list of all equipment, dividing it into main classifications (such as

mechanical, electrical, steam, carpentry, et cetera); by making a schedule of periodic inspections to service each piece on the basis of past experience and reliable information; and by maintaining a simple system of records to ensure that inspections are made on schedule, to provide easy reference on location of equipment, and to record the date on which the servicing was completed.

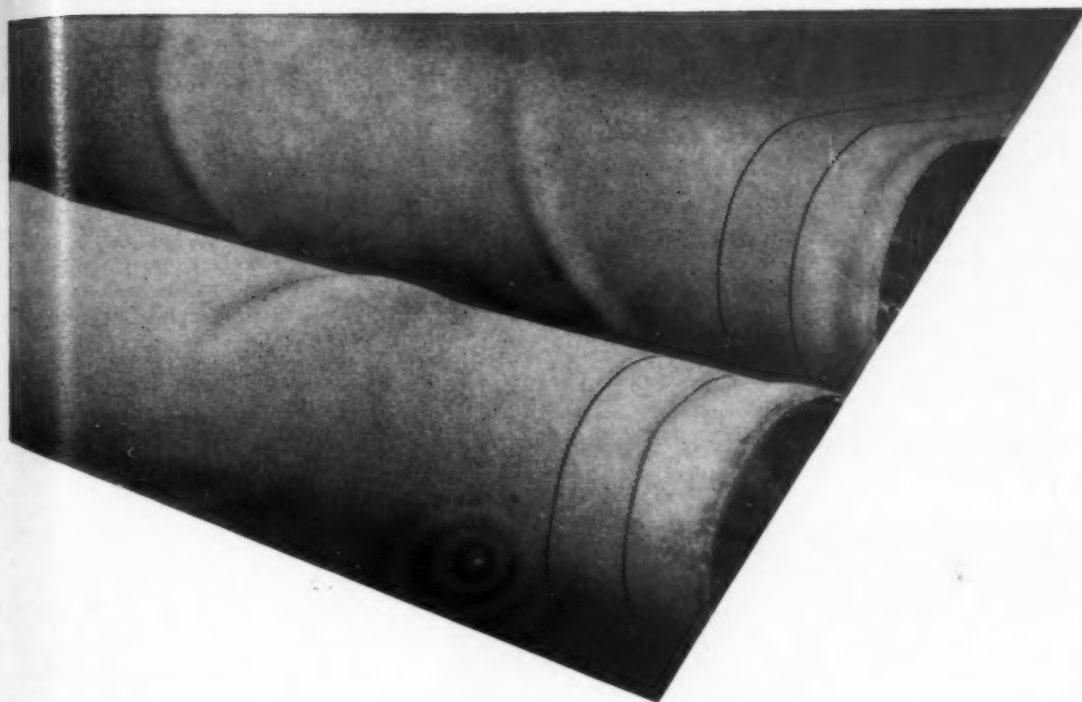
For other repair work, a requisition system should be used. The department head should make the request and, if a delay occurs, he should be notified. This is one department which can make good use of standing orders. The advantages are that it establishes fixed procedural instructions wherever possible; eliminates indecision and shirking of responsibility; can cover every foreseeable emergency by precise instructions; can write out routine inspection schedules to the simplest step; and can even add diagrams of equipment to aid the given instructions. The engineering-maintenance department has relationships with all departments in the hospital and shares responsibility for a number of items with the housekeeping department.

There is no single answer to the question of staff size, and the reasons are fairly obvious. Factors, other than bed capacity, which will influence staff size are age of plant, layout of plant, condition of plant and type of equipment. In a survey of 22 hospitals of 150-200 beds, the number of employees in the engineering-maintenance department varied from eight to 26. The average for this group was ten to 14 employees for each 100 beds. In another survey of hospitals of all sizes, the average was seven employees per 100 beds.

The larger the hospital, the greater is the need for specialization. Local union regulations may affect the degree of specialization. Local municipal by-laws and provincial legislation have certain standards with regards to qualifications of personnel.

What are the characteristics of a good engineer? First of all he must be familiar with every piece of equipment used throughout the hospital. He should be capable of advising the administrator: when purchasing any new equipment, apparatus, appliances or other devices, when planning

(continued on page 78)



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JULY, 1959

Engineering (Continued from page 76)

or designing the construction or operation of additional facilities, and when formulating policies and administrative procedures involving engineering, plant operation, maintenance and safety principles.

Boiler rooms should be separated from other parts of the building by fireproof walls and fire underwriters' doors. There should be exits from these rooms and ample window area. For the

larger hospital, a separate building nearby, away from the patients' bedrooms, is advisable for both boilers and laundry. Steam and water piping from the boiler house should be run in a tunnel which may also serve as a passage for laundry trucks.

It is preferable that the paint shop be located outside the hospital. In any event, it should be of fireproof construction with a fireproof self-closing door. If possible, all shops should be located together near the boiler plant and the engineer's office so that

he can easily supervise operations, repairs, and alterations. The shops should not be located so far from the centre of operations that the time required for a mechanic to reach his work and return for tools will impair efficiency. All shops should be furnished with automatic sprinklers and alarms.

Generally, ordinary tools are owned by the mechanics, but there are many labour-saving devices which may be purchased by the hospital. These include power-driven tools which will soon pay for themselves through the time they save. Tool carts are also great time savers. A reasonable stock of supplies should be kept by each mechanical department—enough for two months' normal use.

The budget will be determined by the hospital board and will depend on the limits to which they wish to extend maintenance. The budget will include: routine operations—cost of utilities, steam plant, et cetera; routine maintenance and repairs—labour, minor repairs, et cetera; equipment replacements; and minor construction—not including the services of an outside architect or engineer.

The boiler room will be operated 24 hours a day, seven days a week. Other services will usually operate on an eight hour day, but some provision should be made for emergency repairs in off hours. Often these repairs can be done by the night watchman if necessary.

All installations should be built according to local building codes and specifications and should be inspected frequently. All employees in the engineering department are usually covered by workmen's compensation, and insurance against explosions, fires and elevator accidents should be carried by the hospital. There are the usual machine shop hazards, and accident prevention should be stressed.

Some of the important records which should be kept within the department are: time charts—temperature-time records which eliminate the constant watching of boiler pressures; cost records—which will aid in the choice of methods and products; parts records—which (indexed by the name of equipment) will eliminate costly emergency purchasing, (cards should list name and ad-

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dress of manufacturer and an alternate source, and should indicate quantity and type of parts to be kept on hand); work charts—a list of all equipment by area and recommended maintenance procedures; and catalogue files—plus recent advertisements of importance and literature from salesmen, will include manufacturer's instructions for use and maintenance of equipment already purchased. Reports to the administrator will include: fuel consumption by months and year to date with comparisons for the same periods in the previous year; a schedule of painting done during the month, areas completed and projected schedule for the ensuing month; and a summary of repairs performed and their cost.

The public will be more interested in a hospital which makes a sincere effort to keep all equipment and facilities in top shape. If elevators are in good operating order, it will be noticed. This is true of other systems in the hospital with which the public comes in contact—stairways, doors, walls, lights, et cetera. Attractive grounds will draw added attention and favourable publicity.

What should the administrator know about this department? He should have sufficient knowledge of boilers, heating systems, elevators, air-conditioning and so on, to be able to discuss problems intelligently with his chief engineer. In turn, he should be able to present and interpret these problems clearly to the hospital board. ■

Notice the need
(Concluded from page 72)

human development. This is the only way in which I can justify myself in advocating a personnel department in organization. When institutions like hospitals demand specialists, from doctors to engineers, technicians and cleaners, it is easy to think of individuals as skilled in their art, for they demonstrate the artistry of their skill daily. But in the process, we can lose sight of persons, of humanity, even in a hospital. Not that we ever do completely in families, factories, or any other decent institution. But we sometimes take humanity for granted and say that we are all men of good will. That is not good enough! It has got us into a lot of trouble, and personnel

work is far more than trouble shooting.

In hospital administration there seems to me to be a more natural milieu for human wisdom than in many other settings. The calibre of staff, the dedication of staff, the visible purpose of healing and the fact that medicine through psychiatry has taught us much that we know about human relations, and so on. The high degree of specialization may have its dangers, however, as well as its necessity. As administration becomes more

complex, as problems of organization come thick and fast, as the old intimacies of the nursing home seem to give way to the highly specialized atmosphere of a macracosmic hospital, you have all witnessed the creakings in human relationships. But don't regard personnel matters as oil in the machinery to offset the friction. Instead, more and more, give leadership in addressing yourselves to that greatest of all questions—What is man, that thou art mindful of him? ■

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Fire Safety

(Concluded from page 53)

ercises, there is no possibility of disturbing the patients.

(a) Training of general personnel should consist of a thorough indoctrination in fire safety.

(b) There should be practical instruction in the use of fire extinguishers, fire hose and in fire fighting procedures.

(c) Movement and emergency care of patients under fire and smoke conditions should be understood.

As a potential discoverer of fire, each employee, nurse or intern should be thoroughly grounded in fire procedures—i.e., know what to do when fire is discovered. Now this covers a very narrow field and the person who discovers the fire has but three things to do. These three steps are the most important of all as they are taken at the outset of the fire, when the fire is presumably small. This is the first line of defence. What the discoverer of fire does at the beginning will determine the seriousness of the case.

1. See that the smoke, heat and

gases produced by the fire and which spread the fire are confined to the room of origin and do not spread into the corridors, patients' rooms, et cetera.

2. Get help, both from the immediate vicinity and the hospital fire squad. A fire should not be handled alone.

3. Attack the fire and control it until the hospital fire squad arrives.

Obviously if the safety of patients is directly affected, this matter would be attended to first and rates top priority.

Now if you have properly organized your forces you will have organized a hospital fire squad of five or six men, preferably from the maintenance staff, boiler room, et cetera, with the engineer in charge. These make the best fire fighters of all.

You will also have included your telephone operator who will act as communications officer, and your elevator operators for transportation. This is all the organization you need at the outset of any fire and this small group, if properly

and consistently trained and practised, with proper equipment will handle any emergency situation in the hospital. The hospital fire squad should be thoroughly trained, not only in handling of fire equipment and general procedures but in strategic fire fighting.

Fire fighting strategy should be pre-planned for the fire brigade, for every location and area in the hospital, and then practised regularly by the fire squad during weekly fire drills.

Pre-planned strategy, a method which I have developed personally for industrial fire protection, is entirely adaptable to hospitals and is operating successfully in many institutions. It consists of taking up certain positions, called exposures, or weaknesses, according to pre-determined planning and survey. The fire fighters when called to fight a fire at a given area, occupy those positions automatically, and armed with appropriate equipment, also pre-determined, block the spread of fire and smoke.

General Alert

Should it become necessary, because of smoke conditions or some other reason, to evacuate a floor or section of a floor, a reserve or general alarm squad should be organized whose sole function would be handling of patients. This group should comprise nurses, preferably, interns and a few orderlies who would respond on a special signal.

In your planning avoid the large scale, top heavy organization and concentrate on efficiency, on smaller groups, according to the area, so that operations may be practised regularly without disrupting the entire hospital. Large bodies of helpers are unwieldy and only create confusion. Remember, ten trained people who know what to do in an emergency are far better than 100 who don't know what to do. ■

"Poe-pourri"

The landlady of a resort boardinghouse made a point of asking her departing guests to write something in her visitors' book. She was very proud of the names and the sentiments inscribed there.

"But I can't understand," she confided to a friend, "what one sour-looking man wrote. People always smile when they read it."

"What is it?" queried the other.

The landlady replied: "He wrote only the words, 'Quoth the Raven'."

Coming Conventions

July 20-24—Canadian Medical Association—British Medical Association, joint annual meeting, Edinburgh, Scotland.

July 27-31—First International Medical Conference on Mental Retardation, The Eastland Hotel, Portland, Me., U.S.A.

Aug. 2-4—Maritime Conference of the Catholic Hospital Association of Canada, annual meeting, Notre Dame d'Acadie College, Moncton, N.B.

Aug. 23-26—American College of Hospital Administrators, 25th annual meeting and convocation, Statler Hotel, New York City.

Aug. 24-27—American Hospital Association, annual convention, Coliseum, Statler Hotel, New York City, N.Y.

Sept. 6-12—World Confederation for Physical Therapy, 3rd international congress, Paris, France.

Sept. 8-12—Western Canada Institute, Royal Alexandra Hotel, Winnipeg, Manitoba.

Sept. 22-23—Catholic Hospital Conference of Alberta, 16th annual meeting, Corona Hotel, Edmonton, Alta.

Oct. 14-16—Saskatchewan Hospital Association, annual meeting and convention, Bessborough Hotel, Saskatoon, Sask.

Oct. 17—Catholic Hospital Conference of Saskatchewan, annual meeting, Bessborough Hotel, Saskatoon, Sask.

Oct. 18-19—Catholic Hospital Conference of British Columbia, annual convention, Vancouver, B.C.

Oct. 20-23—British Columbia Hospitals' Association, annual convention, Hotel Vancouver, Vancouver, B.C.

Oct. 21-23—Conference on Cerebral Palsy, sponsored by the Cerebral Palsy Association of Quebec, Inc., 10th anniversary conference, Montreal, Que.

Oct. 26-28—Ontario Hospital Association, annual convention, Royal York Hotel, Toronto, Ont.

Oct. 27-29—Associated Hospitals of Alberta, annual convention, Jubilee Auditorium, Edmonton, Alta.

Oct. 29-30—Ontario Conference of the Catholic Hospital Association, St. Michael's Hospital, Toronto, Ont.



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Press Relations
(Concluded from page 41)

director must get signed permission from the patient, or if he is a minor, from his parents, before any pictures are taken. It is also necessary to secure the permission of the doctor and the hospital administrator. Moreover, in all cases, the press director should accompany the photographer to the department or to the patient's room and be present while the pictures are being taken.

Always keep in mind that favouritism is the ruination of any press program. All releases should be made available at the same time

to all newspaper, radio and television representatives. There is only one exception to this rule. When a reporter unearths a story on his own initiative, it would be wrong for the director to tell other journalists what their colleague is doing. And an interesting write-up of some hospital undertaking or favourable publicity for hospital facilities and achievements call for a word of thanks and the assurance that the press will be welcome when it calls again. Such acts of courtesy are well worth the time and trouble it takes to say thank you.

The press also has its duties, rights and responsibilities. One of its primary functions is to keep

the public informed about the hospital. Another duty is to further the health education of people in general. In order to perform these duties, the press has the right to count on the co-operation of the hospital. Press representatives are experts in their own fields and the newspaper code of ethics is a safeguard not only for the press but also for the hospital. The hospital that plays fair with the press will find that in times of trouble or unpleasantness, editors, reporters and news commentators will be understanding and sympathetic.

It is important that the press director regard the press not as a nuisance to be avoided or defeated, but as the ideal instrument for disseminating information about the hospital. We may conclude, therefore, that the hospital and the press need each other. A centralized press office with the personal interest of the press director is the best means to establish and maintain a relationship in harmony and mutual satisfaction. ■

Maritime Hospital Association
(Continued from page 55)

the rôle hospitals play in their respective communities, carry the message into the schools so that the next generation will be intelligently informed. They should tell the voluntary hospital story to patients, visitors, and above all, to hospital staffs. The trustee holds the key to the future operation of our hospitals.

Mr. Charters concluded by stating what hospitals need from their governing boards and assured his listeners that if the board did its job no one need fear absolute government control.

Walter W. B. Dick, chairman of the Canadian Hospital Association's Accounting Committee, spoke on "What Accounting Means to our Hospitals". For the hospital trustees and administrators to have peace of mind, he said, they must be armed with figure facts. These are gleaned through the accounting process. Such information provided proof of past action and formed the basis for sound future action. Mr. Dick concluded his address with the observation "Know facts about your hospital and you will have peace of mind."

Dr. J. B. Neilson, in speaking on the topic "The Philosophy of Administration", drew from his experience as a former hospital administrator and from his cur-

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rent position as head of the Hospitals Division of the Ontario Hospital Services Commission. He outlined several problems which were giving concern and explained his philosophy of how they could be solved satisfactorily.

On Friday afternoon, the concluding session, representatives of the Hospital Insurance Commissions in Nova Scotia, New Brunswick and Prince Edward Island discussed various facets of their hospital insurance plans. Dr. D. F. W. Porter, immediate past president of the Canadian Hospital Association, addressed the group on the topic "What the Maritime Hospital Association and the Canadian Hospital Association Mean to Us". Following were reports from the section groups; resolutions, and the election of officers.

Officers Elected

The new slate of officers for the Maritime Hospital Association is as follows: *Immediate past president*—A. J. MacDonald, Glace Bay, N.S.; *President*—Col. L. F. MacDonald, Charlottetown, P.E.I.; *Secretary-treasurer*—Gladys M. Porter, Kentville, N.S.; *Chairman of the N.B. section*—Chaiker Abbis, Edmundston, N.B.; *Chairman of the P.E.I. section*—Neil D. Maclean, Charlottetown, P.E.I.

At the annual dinner the guest speaker was Dr. Frank MacKinnon, principal of Prince of Wales College and president of the Atlantic Provinces Economic Council. Mother Ignatius was presented with an honorary life membership in the Maritime Hospital Association, and in her absence this was accepted on her behalf by Sister Paul of the Cross, superintendent of St. Martha's Hospital, Antigonish, N.S. ■

Twenty Years Ago

From Canadian Hospital, July 1939.

The other day at a hospital convention a hospital engineer related how his hospital in the old days appeased fussy patients who insisted upon more heat. The nurse phoned the engineer who, between tasks, tapped on the steam pipes with a hammer. Hearing the old familiar knock in the one-line steam pipes, the patients quickly quieted down for the time being at least.

* * *

The havoc wrought by air raids creates many factors not apparent at first thought. An illustration of this is the effort being made in England at the present time to

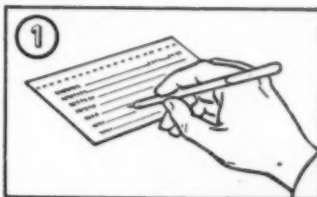
move the radium to protected locations to prevent dispersing of the radium by bomb explosions. It is realized that if but a small portion of radium were so scattered that it became imbedded in walls or the ground it might prove to be a serious and baffling menace to individuals for many generations. It was stated recently that as little as one hundredth of a millogram would probably be fatal if inhaled.

Institute of Ultrasonics Plans Meeting
The American Institute of Ultra-

sonics in Medicine will have its annual meeting on September 2, 1959, at the Leamington Hotel, Minneapolis, Minnesota. The guest speaker at the luncheon meeting will be Russell Meyers, M.D., professor of surgery and chairman, division of neurosurgery, State University of Iowa Hospitals and College of Medicine, who will discuss "The Potentials of Ultrasonics in General Surgery and Surgical Specialties". For any further information, write John H. Aldes, M.D., secretary, 4833 Fountain Ave., Los Angeles 29, California.

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Royal President Installed

His Royal Highness, Prince Philip, Duke of Edinburgh, has been installed as president of the Canadian Medical Association. The ceremony took place in Toronto at the Royal York Hotel on June 30.

This is the first time that a non-medical person has been made president of the C.M.A. Dr. A. D. Kelly, general secretary of the association, stated that they are looking forward to a most interesting and productive year under The Duke of Edinburgh's presidency. Many duties of the office will be carried out by Dr. E. Kirk Lyon, of Leamington, Ont., who has been elected Canadian Deputy to the president.

Special guests at the ceremony were Sir Arthur Thomson of Birmingham, president of the British Medical Association; Dr. Louis M. Orr of Orlando, Florida, president of the American Medical Association; and Dr. Emil Blain of Montreal, president of l'Association des Médecins de Langue Française du Canada. The Bishop of Toronto, Rt. Rev. F. H. Wilkinson, pronounced the invocation.

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Tuberculosis (Continued from page 40)

hypotheses, and claims to have had singular success in every case where these have been observed. Here are some:

1. If the tubercle bacillus remains sensitive to drugs, success is assured.
2. If suitable combinations are used (two or more drugs), drug resistance can be prevented, no matter how long the drugs are used.
3. Commonest cause of failure (particularly for those under treatment at home) is neglect to take sufficient amount of the second drug to prevent resistance developing to the first. When resistance develops to one, then resistance to the second follows, to be followed in turn by resistance to the third.

What is good chemotherapy?

Crofton outlines four regimens:

1. 1 gm. streptomycin daily and 100 mgs. INH twice daily.
2. 1 gm. streptomycin three times a week plus 100 mgs. INH twice daily plus 5 gms. PAS twice daily.
3. PAS 5 mgs. twice daily plus 100 mgs. INH twice daily. Good

for patients on home treatment only or after patients are discharged.

4. Streptomycin 1 gm. daily plus PAS 5 gms. four times a day, but carries some risk of vestibular damage in older patients.

After bad chemotherapy?

Streptomycin 1 gm. daily and 5 gms. PAS twice a day and 100 gms. INH twice a day.

Professor Crofton claims that with such regimens sputum usually becomes negative in from six to nine months. He states that drug resistant organisms will not emerge, the relapse rate will be low and deaths few. When death does occur, it is usually due to *cor pulmonale* where considerable fibrosis of the lung is present.

BCG Vaccination

Nowadays no discussion on tuberculosis is complete without some mention of BCG, which has been used in Canada for over 25 years, first as a research project in Montreal for children in tuberculosis households* and later for Indian babies* and nurses-in-training* in Saskatchewan. These projects were assisted by the National Research Council. They showed that the incidence of tuberculous disease was reduced in the vaccinated, as compared to the controls, in the ratio of one to five.

How reliable were these data? Well, the study of vaccination of Indian babies was well controlled. Families were divided into two groups—A and B. One year all the newborn babies in A group would be vaccinated and the newborns in B left unvaccinated. The following year all the newborns in B group would be vaccinated and the newborns in A left unvaccinated. I think this is an adequate check.

The other two projects were contacts in Montreal* and nurses-in-training in Saskatchewan and Manitoba. The nurses in Manitoba were the controls. These studies were well done and were, I think, convincing to those who knew the two provinces but they were subject to criticism from persons at a distance who felt that the two environments might not be comparable.

Since then two projects, the results of which appear to be irrefutable, have been conducted by the British Research Council⁷. Trials were made with thousands of school leavers. Records of both controls and those vaccinated were kept with meticulous care over a

(Continued on page 86)

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Tuberculosis

(Continued from page 85)

two-and-a-half year period. There could be no question but that the evidence in support of effectiveness of BCG was overwhelming.

A second study conducted by the late Dr. Joseph Aronson of Philadelphia was based on records of vaccinated and unvaccinated Indian children. It was a twenty-year study and up until 1957 included 1,551 vaccinated and 1,457 controls. Dr. Aronson found that the death rate in the vaccinated, as compared to the unvaccinated controls, was 1 to 5.6. One must be impressed by the fact that wherever the trials are made, the same approximate ratio favouring the vaccinated appears.

WHO and UNICEF have initiated comprehensive programs of BCG vaccination. Up to 1957 in 38 countries with a total population of 775 million, 162 million persons had been tuberculin tested and of these 60 million were later vaccinated.

The vaccination program in Canada is being pushed in Quebec and Newfoundland, in the Indian population and among contacts of known cases and groups unavoidably exposed, such as nurses-in-training and medical students. In all, about 145,000 vaccinations are done each year.

One other point should be mentioned before I leave this subject. It is the fact that meningitis is so rare among persons who have been vaccinated with BCG as to be a medical curiosity. The consistency with which this appears in the reports is quite remarkable.

Radiation

No discussion of tuberculosis is complete these days without saying something about the bearing of radiation on case-finding—though the excitement of 1957 seems to have died away. Still, I think we should lose no opportunity to make our position on this point clear.

On the advice of competent authorities we are satisfied that the radiation involved in chest x-rays is so slight as to be of little significance—if our machines are properly supervised and monitored and if the staff members take the necessary precautions. One thing which the furor of a year ago did was to impress on those operating machines how vital it is that they conform to all safety regulations. We feel that the radiation hazard can be reduced to the point where it is of no practical significance. It

should be said, however, that we subscribe to the policy of reducing radiation wherever possible, so that an individual will have a reserve for x-ray procedures which may be required in the future and also to take care of any increase in radiation from external causes.

Summary

Tuberculosis continues as a problem in clinical practice and as a serious public health problem. Deaths have been markedly reduced, but incidence rates fall much more slowly. The use of antibiotic drugs together with resection surgery has changed the prognosis of the disease to a great degree.

Fewer treatment beds are required, mainly because treatment has been shortened. Re-admissions of tuberculosis patients continue at a high level (about 1 in 3) probably because of the great increase in the number of tuberculosis patients in the community who have been successfully treated following previous admission, but who have later reactivated. Early diagnosis continues to be the most important factor in successful treatment. For this reason, case-finding services must be maintained, including proper use of chest x-rays. Radiation involved can be reduced to the point where it is of little significance. BCG continues to have a place in the tuberculosis program, particularly in high incidence areas and population groups.

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Urology Award

The American Urological Association offers an annual award of \$1,000 (first prize — \$500, second prize — \$300 and third prize — \$200) for essays on the result of some clinical or laboratory research in urology. Competition is limited to urologists who graduated not more than ten years ago and to hospital interns and residents doing research in the field.

The first prize essay will appear on the program of the forthcoming

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meeting of the American Urological Association, to be held at Palmer House, Chicago, Ill., May 16-19, 1960.

For full particulars, write the

executive secretary, William P. Didusch, 1120 North Charles St., Baltimore, Maryland. Essays must be in his hands before December 1, 1959.

Classified Advertising

Advertisements for insertion should be mailed to Canadian Hospital, 57 Bloor Street West, Toronto 5, Ontario. Rates for classified advertisements are as follows:

\$3.75 per column inch or fraction thereof, minimum charge \$3.75. Display advertisements, set in a box, may be requested on advertisements of 2 inches or larger at no additional charge, 1/4 page display advertisement—\$25.00. Advertisements must be received by the first of the month to appear in that month's issue.

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Please send particulars of experience and salary required in first letter. Preference given to pharmacist with hospital experience. Write to Superintendent, The Hospital for Sick Children, Toronto.

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Breathing Via Vacuum Cleaner

Doctors at Ham Green Hospital, Pill, near Bristol, England, have adapted a lightweight vacuum cleaner as a breathing aid for poliomyelitis patients. Thus they have made it possible for patients, hitherto confined to a small radius around their beds, to move freely in wheel chairs, to make excursions near the hospital and to take journeys by train or other transport.

Sufferers from poliomyelitis may require artificial respiratory aid (the "iron lung") or portable apparatus such as Cuirass or chest plate respirators. This apparatus is suitable for patients while they sleep, but it is cumbersome and weighty, limiting the patient's movements during waking hours. The doctors therefore sought simpler equipment for more portable use and they had the idea of using a small vacuum cleaner, specially wired by the makers to run from a 12-volt battery. In its ordinary form the apparatus is familiar to hundreds of housewives as a small hand cleaner, weighing only five pounds with a high delivery of air at a satisfactory pressure.

In order to use the machine as a blower, the collecting bag assembly is removed and replaced by an air-tight tubed duraluminium plate machined to fit the blower end. Plastic tubing a half inch internal diameter and about a yard long is

attached to the metal tube of the plate. The other end of the plastic tube is connected to a metal tube some four inches long, bent at right angles to provide a convenient bend to conform to the angle of the patient's chin. The other end of the metal tube has a three-inch length of plastic tube connected to it.

The mouthpiece is held in the patient's teeth, the machine is switched on and the lungs are inflated as required. Biting the mouthpiece stops the air supply and permits exhalation. The simple breathing movements required are easily mastered. Breathing by this method can go on for long periods or the apparatus can be used for intermittent short intervals. Talking is possible and expansion of the lungs is remarkably good. Wheel chairs have been adapted to carry the apparatus, or the apparatus may be transported by hand. Short and long journeys are undertaken which were never before visualized, and apart from all else, patients' morale is substantially improved.—*Feature, U.K. Information Service.*

Cleaning Leather

The formula for cleaning leather upholstery is simple—a mixture of soap and water. To get rid of most stains and dirt, just follow these instructions:

1. Dampen a wad of cheesecloth, and rub it on a cake of mild soap until it forms a merinque-like lather.

2. Shampoo the lather on the leather in areas of about two square feet, wiping it off with a clean, damp cloth.

3. Buff to a high sheen, using clean, dry cheesecloth.

What could be simpler? Never use saddle soap, furniture wax or polish, oil or nail polish remover, naphtha or other household cleansing and bleaching agents.—*Institutions.*

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COMPETITION NO. 59:420.

New Paint Fights Fire

The latest tests by Underwriters' Laboratories, Chicago, Ill., show that highly combustible interior surfaces and finishes can be made practically non-combustible with only one coat of fire retarding paint. The flame spread characteristics of highly combustible fibre acoustical tile, for example, were reduced to less than 20. (Complete non-combustibility is represented by 0).

Tests on Douglas fir were extended from a normal 10-minute fire exposure to 30 minutes. They showed that a flame spread rating of less than 25 can be maintained with these paints.

The reports of the National Fire Protection Association on large fires in schools and hospitals over the past four years have highlighted three major inadequacies: (a) inadequate exits prevent escape of the occupants; (b) open stairwells permit small fires to develop rapidly, and (c) combustible interior finishes serve as a source of fuel for the fire and they introduce smoke and toxic gases. The last inadequacy has been particularly emphasized as a contributor

to loss of life, since fire spreads so quickly from floor to floor in multiple-storey buildings.

Fire retarding paints are recognized through their ability to foam up or "intumesce" upon exposure to heat or fire. The black, marshmallow-like blister so formed prevents flame spread and minimizes heat penetration by its insulating action. It provides the time for evacuation of occupants and the opportunity for attacking the fire with fire-fighting equipment.

The characteristic heat-insulating action offers protection to non-combustible material such as structural steel, roof deck supports, and solvent storage tanks. The paint is also being used for aircraft and missiles, as well as for the treatment of plastic components of air conditioning units and television cabinets.

Underwriters' Laboratories used the tunnel test to evaluate the combustibility of interior finishes. The test is conducted in a 25-foot long chamber lined with fire brick. A sample of the building material to be tested is fastened to the underside of the detachable top of the chamber and secured in

position. Gas burners at the fire end of the chamber are ignited and engineers observe how far the flames spread along the test material within a given period of time. Using as extremes of combustibility a flame spread of 0 for asbestos cement board and 100 for unpainted red oak, the test establishes flame spread factors of various materials within these limits. The lower the flame spread, the higher the degree of fire protection.

Ammonia + Hypochlorite = Poison

There have been many reports of incidents when ammonia and hypochlorite bleach were mixed and a highly irritating gas resulted. In two cases, they were deliberately mixed to remove dirt and to bleach at the same time. In one case they were accidentally mixed. Since both the chemicals involved are found in practically every home, it would appear that the hazards described might be widespread and could very well result in serious injuries. It is particularly dangerous to young children, especially in a small, poorly ventilated kitchen. —*Safety Newsletter.*

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Institute in Hospital Pharmacy

On Saturday, May 2, a one day institute in hospital pharmacy was held at the Ontario College of Pharmacy in Toronto, Ont. Following the greetings presented to this first institute by the Council of the Ontario College of Pharmacy, the Canadian Society of Hospital Pharmacists and its Ontario branch, Dr. W. I. Taylor gave "The Views of the Canadian Council on Hospital Accreditation on the Pharmacy and Therapeutics Committee and the Formulary System". The standards for accreditation include broad principles in order to be useful for all types and sizes of hospitals. Neither a formulary nor a pharmacy and therapeutic committee is essential to accreditation, but both are considered desirable since the interest of the program is to improve the quality of patient care. Advantages are seen in administration, economy, education, science and the professional capacity of the department. The pharmacist is necessary to these, as is a fully equipped, indexed, current library. Although a regularly revised drug list is acceptable, the formulary also contains monographs, indexes, conversion tables, a list of approved abbreviations and titles, pharmacological listing, and uses generic names. Some also include usage, dosage, means of administration and the forms available.

Sr. M. Columba, St. Joseph's Hospital, Toronto, then carried on this theme in her topic "Formulas for a Formulary". She said a formulary must be tailor-made for each hospital since the complete list of drugs stocked in any one hospital is not exactly the same for any other hospital. The pharmacy and therapeutics committee selects and approves the drugs before their incorporation into the formulary—and constant revisions and additions are necessary. Therefore, a loose-leaf binder form is quite practical. Cross-indexing is necessary whether the formulary is sectioned by the area of treatment or type of drug, alphabetically or therapeutically. Sr. Columba found the long, slow process of preparing the formulary for St. Michael's Hospital, Toronto, a very gratifying experience in its educational function for hospital staff and also in the contacts made through the pharmacy and therapeutics committee.

Dr. R. W. Gunton, Toronto Gen-

CANADIAN HOSPITAL

eral Hospital, followed with a talk on "Diuretics". These have been used for a long time in treating such a variety of disorders as congestive heart failure, nephrosis, premenstrual oedema, cerebral oedema, Maniere's disease and glaucoma. In treating heart failure, digitalis and pressor amines increase the output of the heart, giving the same end result—relief of the fluid pressure—as the diuretics, but they are not considered to belong to this group. Their action is primarily on the heart. The older diuretics included groups such as saline, solute (ureas, glucose), xanthines (theophylline, caffeine), acidifying salts (ammonium and calcium chlorides) and the mercurials which, though effective, were too toxic for prolonged use. Newer advances in this field have brought out the carbonic anhydrase inhibitors, which include acetazolamide and chlorothiazide. This latter one has a direct effect on the renal tubules, and is an orally useful hypotensive drug which reduces the total blood volume. The hydro-form is even better due to lower dosage.

The panel discussion that followed consisted mainly of the commission's views on the hospital pharmacy. The budget prepared was merely a guide by which to evaluate each hospital and it includes improvements in salaries, equipment, education, library and replacements. It requires a competent buyer to control inventory. Savings are to be directly reflected in the rates to the public—as are abuses. If drugs are indiscriminately used ("take home drugs" are considered an abuse of the system) a list will be compiled which will not be covered by the O.H.S.C.

The commission agrees that every hospital should have a pharmacist but that many are too small to employ one full time and therefore should have one who has other duties as well or make arrangements with a neighbouring retail pharmacist for part-time service.

Two speakers from the Faculty of Pharmacy, University of Toronto followed.

Dr. G. C. Walker's discourse on "Practical Manufacturing in the Hospital Pharmacy" outlined the steps and equipment, time and space involved in a manufacturing program. Unless an ultimate saving is effected, such a program would not be practical. He stressed

the point that very complete records of every procedure must be kept.

Dr. Teare followed this theme as he spoke on "Control Procedures". He outlined the processes needed to test for pyrogens, sterility, and chemical assay, which are an important part of the manufacturing program.—*M. A. Cooley, Queensway General Hospital.*

Cleaning Terrazzo Floors

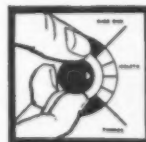
Always use a neutral cleaner on terrazzo floors, since acid cleaners, alkaline salt cleaners and harsh

abrasives may be harmful. The floor should be wet before cleaning; this prevents absorption of the cleaning solution into the floor. After cleaning, the floor should be thoroughly rinsed and dried.

A new terrazzo floor should be washed frequently to remove mineral salts which are a by-product of the settling and curing of the concrete bonding material. After several months, the floor will have a natural sheen and will require less work. An occasional scrubbing with a scouring powder added to the cleaner will help in repolishing the floor.—*Institutions.*

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... Across the Desk

News Released by Hospital Supply Houses

By C.A.E.

New Odourless Deodorant can Banish Hospital Smells

Science has apparently doomed the familiar "hospital smell".



A chemical that kills odours but has no odour itself is now being supplied initially to hospitals, mortuaries and nursing homes by the National Cylinder Gas Division of Chemetron Corporation.

R. W. Burmeister, head of NCG medical sales, described the discovery as unique because it does not have a perfumed "masking" scent, does not paralyze people's sense of smell, and works by fixation, a chemical reaction with the odour itself resulting in complete absorption of the odour.

The liquid absorbs nearly all odours when sprayed, and in addition inhibits the growth of moulds and mildew. Tests have shown that it is non-toxic and non-allergenic and that it will not irritate the

skin, corrode metal, stain, burn or explode.

The NCG odourless deodorant, produced by McGraw-Edison Company, is supplied by National Cylinder Gas in aerosol spray containers and in concentrated form to be mixed with nine parts of water. It is made of an ammonium base compound, N-soya N-ethyl Morpholineum ethosulphate.

Further details available from National Cylinder Gas Division of Chemetron Corporation, 840 North Michigan Avenue, Chicago 11, Illinois.

A. C. Wickman Limited to sell Telco Apparatus

A. C. Wickman Limited, Electronics Division, are pleased to announce their appointment as Canadian representative for Telco, of Paris, France.

Telco manufactures intracardiac micromanometers, manometers, pressure sensitive heads, and amplifiers. Telco also offers complete systems, including amplifiers, tape recording facilities, and cathode ray oscilloscope monitoring devices. These systems are in use for surgical procedures as well as catheter investigations.

Further details or assistance in discussing a specific application of this equipment may be obtained from A. C. Wickman Limited, P.O. Box 9, Station "N", Toronto 14.

5,000 Hour Corridor and Chandelier Lamps

Verd-A-Ray Industries Limited, 1285 Hodge Street, Montreal 9, is marketing a new improved type

of lamp which is especially designed to cut high maintenance costs in corridors, aisle-ways, exit fixtures and stairways.

This lamp is guaranteed by Verd-A-Ray for 5,000 hours, or one year, whichever comes first. The manufacturer advises that this lamp can be burned in any position, and that it is available in 10 through 100 watts. Literature will be supplied on request.

Lily Coffee Service Presents New Features

A new coffee service, which combines the practicability of the flavour-saving plastic coated paper cup with the appearance of fine dinnerware, has been introduced by Lily Cups Limited.

The service cup consists of a unique combination of paper and plastic. The practically indestructible scratch-resistant holder is made of a plastic known as "Cyclocac" and securely holds a disposable plastic coated cup. A matching 9" plastic coated plate is also available.



It offers every advantage of conventional coffee service with these extras: no wasted time spent on bussing, washing or sterilizing, cups that pack away neatly and compactly (250 in a space only seven inches square), and no breakage loss.

New Device in Automatic Bread Production

The newest twist in automatic bread production—one that makes it possible for baking departments to mechanically duplicate hand twisting at 42 loaves per minute, or automatically mould, and pan single loaves at 60 pieces per minute—is described in a new publication released recently by the Food Machinery Division of Canadian Baker Perkins Limited, Brampton, Ontario.

The four-page, 2-colour brochure illustrates and includes technical specifications, as well as performance data on an automation development that required

(continued on page 96)



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Let the Dustbane representative in your area make a FREE and complete survey of your maintenance requirements. He will submit recommendations and personally coach staff, without charge, in the fundamentals of safe, low-cost and efficient maintenance. Through specialized planning, costs can be trimmed and expensive floors preserved for years longer.

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Across the Desk
(continued from page 94)

17 years of research; a machine that provides assured sanitation, produces fine texture and better tasting loaves in weights of 1 up to 2 pounds, in several varieties.

F. W. CHAPMAN, M.B.E.

Mr. F. W. Chapman, M.B.E., manager of the Toronto branch of Ingram & Bell, Limited, and secretary of the Canadian Surgical Trade Association, died May 19th.

Mr. Chapman joined Ingram & Bell, Limited, in 1927. His early years with the company were spent as a sales representative in Western Canada, Ontario and the City of Montreal. In 1950 Mr. Chapman was appointed manager of the Quebec and Maritimes branch of Ingram & Bell, Limited, serving in this capacity until 1957 when he was transferred to the Toronto Head Office. This long period of service brought Mr. Chapman into close contact with many physicians and hospital personnel who respected and admired his high ideals.



F. W. Chapman

Mr. Chapman had an outstanding record in World War II, serving with distinction as Quartermaster Captain on two Canadian hospital ships. It was during this period that he received his M.B.E.

**Medical Director of
Cyanamid of Canada**

The appointment of Dr. R. G. Warminton of Niagara Falls, Ontario, to the newly created position of medical director, Medical Products Department, Cyanamid of Canada Limited, has been announced by J. R. Brown, Jr., department manager.

Dr. Warminton, a diplomat of the American Board of Preventive Medicine and a Fellow of

the Industrial Medical Association, has been medical officer for Cyanamid's Niagara plant for the past 11 years.



Dr. R. G. Warminton

He is a graduate of the University of Toronto School of Medicine, class of 1936 and was in private practice in Toronto until he joined the Royal Canadian Air Force in 1942 as a medical officer with the rank of Flight Lieutenant. His many appointments in the service included one year as chest consultant at Christie Street Hospital in Toronto under Dr. G. C. Anglin, and as a consultant to the three services and the Department of Veterans' Affairs.

**Vasodilan is New Product
of Mead Johnson**

A myo-vascular relaxant (isoxsuprine), a new synthetic, non-hormonal compound, which provides selective relief of spasm of smooth muscle predominantly in the peripheral vascular bed, in the uterus and in the bronchial tree, has been introduced by Mead Johnson Limited, Toronto. It is indicated for symptomatic treatment of peripheral vascular disease and dysmenorrhea.

No known contraindications to oral administration have occurred in recommended doses. Intramuscular administration is not recommended in presence of hypotension or tachycardia. Intravenous or intra-arterial administration is not recommended.

**Sherry Southam President
of Sterilizer Company**

The election of W. G. Sheraton Southam as president of the American Sterilizer Company of Canada, Limited, has been an-

nounced. W. J. DeMarco, formerly factory manager of the Brampton plant, was named vice-president, manufacturing. Mr. Southam has served as vice-president and general manager of the well known manufacturer of hospital technical equipment since the founding of the Canadian company in August of 1956.

Born in Hong Kong, Mr. Southam came to Canada at the age of 18 months. Following his education in Toronto and Winnipeg, he served with the General Electric Company x-ray Division in England, India, Montreal and New York. In 1951 he was appointed manager of x-ray and medical products section of International General Electric, responsible for export sales throughout the world.



W. G. Sheraton Southam

The American Sterilizer Company of Canada, Limited, is affiliated with the American Sterilizer Company, Erie, Pa. Other affiliated or subsidiary companies include Amsco de Mexico, S.A., Amsco Europe, and Amsco Laboratories, Inc., Milledgeville, Georgia.

**Syracuse China Corporation
Acquires Canadian Plant**

Syracuse China Corporation, producer of china tableware in the United States, has acquired a controlling interest in the former Vandesca Pottery Limited, Joliette, Quebec. In making the announcement, Foster T. Rhodes, president of Syracuse China Corporation, explained that the acquisition was made through the purchase of a majority of the outstanding stock of Vandesca-

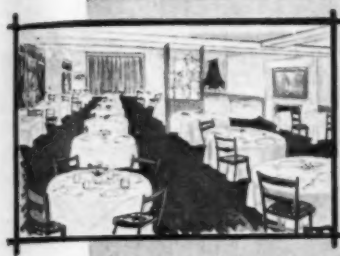
(continued on page 98)

Canada's finest Table Glassware by **DOMINION**

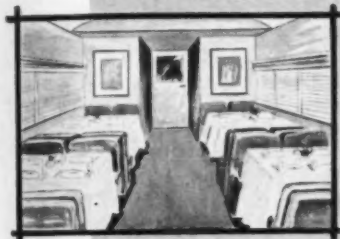
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BETTER THAN THE REST . . .

YET COSTS YOU LESS



Canada's leading hotels, motels and restaurants maintain a high standard of service; they stand for comfort, cleanliness, courtesy — and the choicest in food and beverage, served in glistening glassware by Dominion . . . the glassware that's as handsome as it is durable — and costs less!



There's something fascinating about dining on a train. The meal is leisurely, the food varied and appetizing, the atmosphere intimate. And, to add sparkle to the occasion, your table is graced with glassware by Dominion . . . lovely, stylish, crystal-clear . . . the finest glassware made in Canada!



It is fitting that in the mess-halls of Canada's armed forces, the tables are set with glassware by Dominion . . . the finest in glassware for the finest of men. Like Canada's Navy, Army and Air Force, Dominion glass is durable, dependable . . . and distinctively Canadian!

THIS IDENTIFIES CANADA'S QUALITY TABLE GLASSWARE
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**AUDIO-VISUAL NURSES' CALL
WITH INTERCOM**



Combines reliability with safety, advanced engineering with simplicity in the most up-to-date signaling and communication system for hospitals.

Its features:—

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- LIGHT SIGNALING SYSTEM
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The Electro-Vox Audio-visual Nurses' Call system is the outcome of 25 years experience in equipping hospitals throughout the country. It is designed specifically for the stringent requirements of 100% RELIABILITY, SAFETY and EFFICIENCY essential in hospitals.

Write for further particulars

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Across the Desk
(continued from page 96)

Syracuse, Limited, the successor corporation.

According to Rhodes, production facilities at the Canadian firm will be more than double, starting immediately, with the addition of more product lines and decorative treatments. Syracuse China Corporation will supplement Vandesca sales in Canada from the broader lines of tableware from its plants in the United States.

New Literature On Liquefied Gas Containers

A new six-page folder, describing a complete line of small containers for the transport and

storage of liquefied gases, is available from Linde Company, Division of Union Carbide Canada Limited.

The folder includes descriptions, design features and performance data for containers ranging in capacity from 1 to 100 liters. This includes the new 25 liter aluminum container, which has a special insulation to minimize evaporation losses and is designed for use in plant, laboratory, hospital and medical offices.

For free copies of this folder, (F-1254) write to Linde Company, Division of Union Carbide Canada Limited, 40 St. Clair Avenue East, Toronto 7, Ontario.

Operating Pads and Linens Are Gas Sterilized

At the Northside Division of Rochester General Hospital, Rochester, New York, operating table and carrier pads are thoroughly decontaminated by chemical gas sterilization immediately following surgical procedures on septic cases, i.e. tetanus, gas gangrene, etcetera. The pads are processed, without prior physical cleaning, in a gas sterilizer recently installed in the surgical suite. According to Miss V. Tyler, operating room supervisor, a four-hour processing effectively decontaminates the pads without damaging the foam rubber pad or cover. At the conclusion of (concluded on page 100)

C. W. Westlake New President of NCR of Canada

C. W. Westlake of Toronto, who for the past 11 years has headed The National Cash Register Company's sales operations in Canada, has been elected president of The National Cash Register Company of Canada, Limited.

The board of directors of NCR of Canada, Limited, has also elected Gordon Follett, also of Toronto, to the post of vice-president of the company. Mr. Follett for the past year has served as factory manager of the company.

P. G. Larter of Toronto, comptroller of the company since 1953, has been named a director.

Mr. Westlake takes over the position held by the late George A. Marshall of Toronto from 1951

until his recent death. A native of Bethany, Ontario, Mr. Westlake is a veteran of 37 years' service with the company, having started in 1922 as a collector in NCR's Toronto office.

In 1939 Mr. Westlake was named manager of the company's Hamilton branch office where he served until 1946 when he was appointed a cash register instructor for the company. He will continue to direct these operations in his new position as president of the company.

Mr. Follett, a native of Toronto, joined the company in 1935 as an assembler. He served in various factory posts until 1942 when he entered the Royal Canadian Air Force. Following the war, he returned to the factory, and in 1952

became factory superintendent. Last year he was appointed factory manager, at the same time being elected a director of the company.

Mr. Larter, a native of Regina, Saskatchewan, joined the NCR organization in 1953 as comptroller. Prior to that time, he had been affiliated with Canadian Industries, Limited, from 1942 to 1945 as divisional accountant following his graduation from the University of Saskatchewan where he received a bachelor of commerce degree.

He is secretary and director of the Toronto Control of the Comptrollers Institute of America and a past director of the Toronto chapter of the Tax Executives Institute.



C. W. Westlake



Gordon Follett



P. G. Larter

Anniversary Celebration at St. Joseph's General Hospital

When the cornerstone of a new addition to St. Joseph's General Hospital in Port Arthur, Ont., was laid, a three-day celebration of the hospital's 75th anniversary began. The building was suitably decorated for the occasion and was gay with bunting and flags. Baskets of spring flowers were suspended from the ceiling; spring bouquets adorned the pillars.

The auditorium of the nurses' residence was filled when more than 900 people watched the "History of the Sisters of St. Joseph and St. Joseph's General Hospital" presented by a cast of over 125 people—Sisters of St. Joseph and members of the hospital staff. The two-act pageant showed the beginning of the Order of Sisters in France some 300 years ago. The stages in the life of a Sister, the troubles of the Order during the French Revolution, the arrival of the Sisters at their first mission in Carondelet and later in Prince Arthur's Landing, the beginnings of St. Joseph's General Hospital, the hospital's growth and development—all these events were depicted with skill.

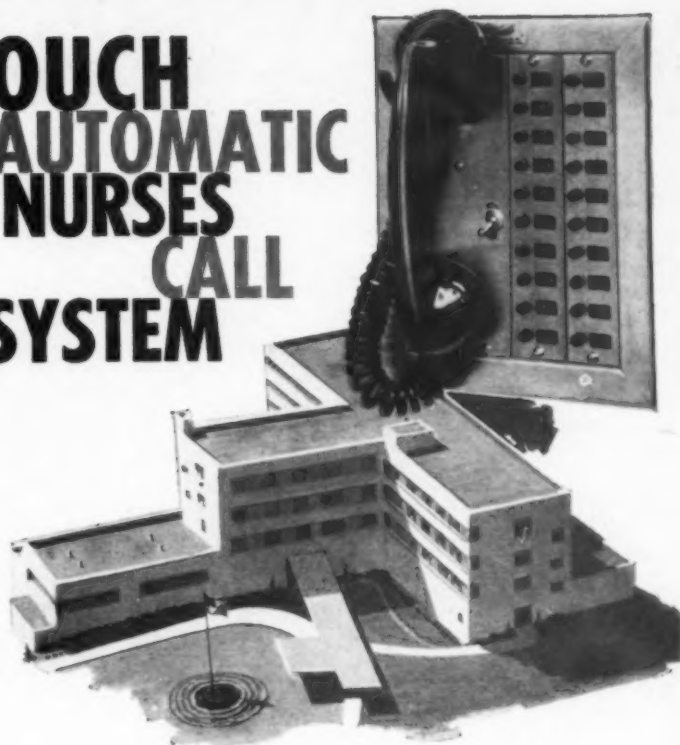
The second day of the celebration began with a Pontifical Mass of thanksgiving. Following this, guests attended an anniversary breakfast in the nurses' residence. In the afternoon, there was a nurses' alumnae reunion which featured a friendship hour.

The third day also began with a mass which was followed by an anniversary breakfast for alumnae. The celebration ended with a gala anniversary ball which was sponsored by the women's auxiliary. A suitable ending for such an important event—the 75th anniversary of St. Joseph's General Hospital.

An Association is Formed

More than 160 operators of nursing homes in Ontario met recently to compare problems, hear authorities define their position and establish a Nursing Home Association. A steering committee was elected, representing five regions across the province. The duty of this committee will be to develop policy and procedures and report back by correspondence to nursing home operators. Mrs. Jean Good, executive director of the Ontario Society on Aging, was named advisor until the new association becomes established.

COUCH AUTOMATIC NURSES CALL SYSTEM



DESIGNED FOR SUPERIOR PERFORMANCE

Couch U/L approved Nurses Call Systems provide:

- Visual signaling with audio communication
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Nylon pull cord stations provide these advantages:

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Optional system features:

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Your step-by-step guide to Nurses Call Systems design, available on request, is Couch Bulletin 137.

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Across the Desk
(concluded from page 98)

the sterilization cycle the pad can be physically cleansed to remove any adhering soils.

According to Miss Tyler, decontamination in the gas sterilizer has eliminated the necessity for the occasional incineration of pads and linen which was previously required with certain septic cases. Perhaps of more importance, handling of the pads while they are contaminated is minimized: (1) by eliminating physical cleansing while the pad is septic, and (2) by situating the sterilizer within the surgical suite.



The surgical suite gas sterilizer referred to is a 16 x 30 unit made by Wilmot Castle Company. It operates at low temperature (103° F.) and low humidity (40-50% RH) and is completely automatic. All that is required is the attachment of a cylinder of gas and setting the time for the cycle on the control panel dial.

For further information contact Wilmot Castle Company, 1933 East Henrietta Road, Rochester, New York.

**Canadian General Electric Announces
3100-Lumen, 40-Watt Lamp**

Canadian General Electric has announced a completely re-designed 40-watt fluorescent lamp, the Premium 3. Rated at 3100 lumens, the Premium 3 fluorescent provides the lowest over-all cost of light of any 40-watt lamp on either rapid start or preheat fluorescent circuit operation.

The lamp delivers 77.5 lumens per watt, a new high in efficiency, with a rated life of 7500 hours on rapid start circuits and more than 5000 hours on preheat ballasts with FS 400 starters.

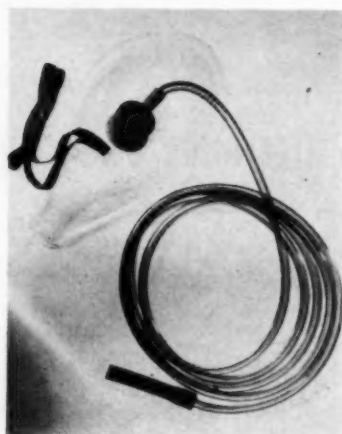
It is claimed that General Electric's new fluorescent gives 11 to 17 per cent more light than any

other 40-watt lamp on the market. A completely new design, from phosphor to electrodes to gas filling, produces the 3100-lumen light output.

**Pharmaseal Laboratories
Introduces New Oxygen Mask**

A new, expendable oxygen mask, designated the "Kaslow" Oxygen Mask, has been announced by Pharmaseal Laboratories, Glendale, California.

Intended for general oxygen administration therapy, the mask is made of smooth, translucent polyethylene plastic, with a five-foot green connecting tube attached. Designed especially for patient comfort, it is light in weight, with carefully rolled edges wherever it touches the patient's face. Longer than other expendable masks now available, one size fits all face shapes and sizes.



The unique baffle-connector swivels so that the flexible connecting tube can be turned in any direction to reach the source of oxygen, whether it be overhead or beside the bed, without pulling the mask away from the patient's face. The specially designed baffle-inlet diffuses the oxygen coming into the mask, preventing it from striking directly against the patient's face. Easily washed for re-use, this expendable mask eliminates the hazard of cross-infection from one patient to another.

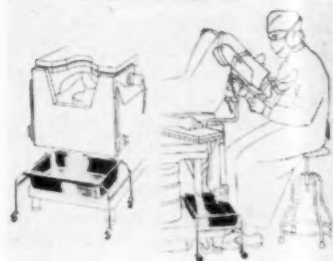
**Shampaine Stainless Steel
Catch Basin**

The addition of a newly designed kick-about catch basin to their line of OR specialties and

accessories has been announced by the Shampaine Company.

The S-3631-A stainless steel catch basin has a rectangular shape that gives a greater area to receive drainage and eliminates much of the time and trouble involved in post-operative clean-up.

Of added importance is the construction of the stainless steel frame which allows ample toe space and is of adequate height so that the basin can be placed over the base of the operating table or OB table.



The unit is mounted on two inch conductive casters to reduce the dangers from electrostatic hazards.

For complete details and literature write to the Shampaine Company, 1920 South Jefferson, St. Louis, Missouri.

Radiation Lab

A \$60,000 portable laboratory for measuring radiation will be operating some time next summer in Ontario. For some time, the provincial department of health in Ontario has been concerned with the possible hazards to public health from the increasing use of sources of ionizing radiation. Although at the present time the average person is receiving a lifetime total radiation far below any health hazard level, it is felt advisable that steps be taken to reduce any unnecessary exposure to a minimum.—Ont. Gov. Services.

Conductive Terrazzo Flooring

The division of building research of the National Research Council has prepared a publication entitled *How to Make Conductive Terrazzo Flooring*. Copies are ten cents each and may be obtained from Publications Section (NRC 4903), Division of Building Research, National Research Council, Ottawa, Ontario.—B.C.H.I.S. Bulletin.